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Introduction

The following warning may be required by California law:

CALIFORNIA Proposition 65 Warning

WARNING: Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. In addition, certain fluids contained in vehicles and certain products of component wear contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

ICONS

Indicates a safety alert. Read the following section on *Warnings*.

Indicates vehicle information related to recycling and other environmental concerns will follow.

Correct vehicle usage and the authorized disposal of waste cleaning and lubrication materials are significant steps towards protecting the environment.

Indicates a message regarding child safety restraints. Refer to *Seating and safety restraints* for more information.

Indicates that this Owner Guide contains information on this subject. Please refer to the Index to locate the appropriate section which will provide you more information.

Introduction

WARNINGS

Warnings provide information which may reduce the risk of personal injury and prevent possible damage to others, your vehicle and its equipment.

BREAKING-IN YOUR VEHICLE

There are no particular guidelines for breaking-in your vehicle. During the first 1 600 km (1 000 miles) of driving, vary speeds frequently. This is recommended to give the moving parts a chance to break in.

INFORMATION ABOUT THIS GUIDE

The information found in this guide was in effect at the time of printing. Ford may change the contents without notice and without incurring obligation.

EMISSION WARRANTY

The New Vehicle Limited Warranty includes Bumper-to-Bumper Coverage, Safety Restraint Coverage, Corrosion Coverage, and 7.3L Power Stroke Diesel Engine Coverage. In addition, your vehicle is eligible for Emissions Defect and Emissions Performance Warranties. For a detailed description of what is covered and what is not covered, refer to the *Warranty Guide* that is provided to you along with your Owner's Guide.

SPECIAL NOTICES

Notice to owners of diesel-powered vehicles

Read the 7.3 Liter Power Stroke Direct Injection Turbo Diesel Owner's Guide Supplement for information regarding correct operation and maintenance of your diesel-powered light truck.

Introduction

Notice to owners of pickup trucks and utility type vehicles

Utility vehicles have a significantly higher rollover rate than other types of vehicles.

Before you drive your vehicle, please read this Owner's Guide carefully. Your vehicle is not a passenger car. As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of control or an accident.

Be sure to read *Driving off road* in the *Driving* chapter as well as the "Four Wheeling" supplement included with 4WD and utility type vehicles.

Using your vehicle with a snowplow

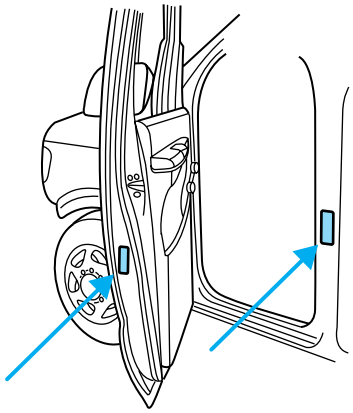
For more information and guidelines for using your vehicle with a snowplow, refer to the *Driving* chapter.

Using your vehicle as an ambulance

If your light truck is equipped with the *Ford Ambulance Preparation Package,* it may be utilized as an ambulance. Ford urges ambulance manufacturers to follow the recommendations of the *Ford Incomplete Vehicle Manual, Ford Truck Body Builder's Layout Book* and the *QVM guidelines* as well as pertinent supplements. For additional information, please contact the Truck Body Builders Advisory Service 1–877–840–4338.

Use of your Ford light truck as an ambulance, without the Ford Ambulance Preparation Package voids the Ford New Vehicle Limited Warranty and may void the Emissions Warranties. In addition, ambulance usage without the preparation package could cause high underbody temperatures, overpressurized fuel and a risk of spraying fuel which could lead to fires.

If your vehicle is equipped with the Ford Ambulance Preparation Package, it will be indicated on the Certification label. The label is located on the driver's side door pillar or on the rear edge of the driver's door. You can determine whether the ambulance manufacturer followed Ford's recommendations by directly contacting that manufacturer. Ford Ambulance Preparation Package is only available on certain 7.3L Diesel engine equipped vehicles.



Notice to owners with vehicles equipped with Power Take Off (PTO) capability

Refer to the *Driving* chapter for more information and guidelines for operating vehicles equipped with PTO.

Introduction

These are some of the symbols you may see on your vehicle.

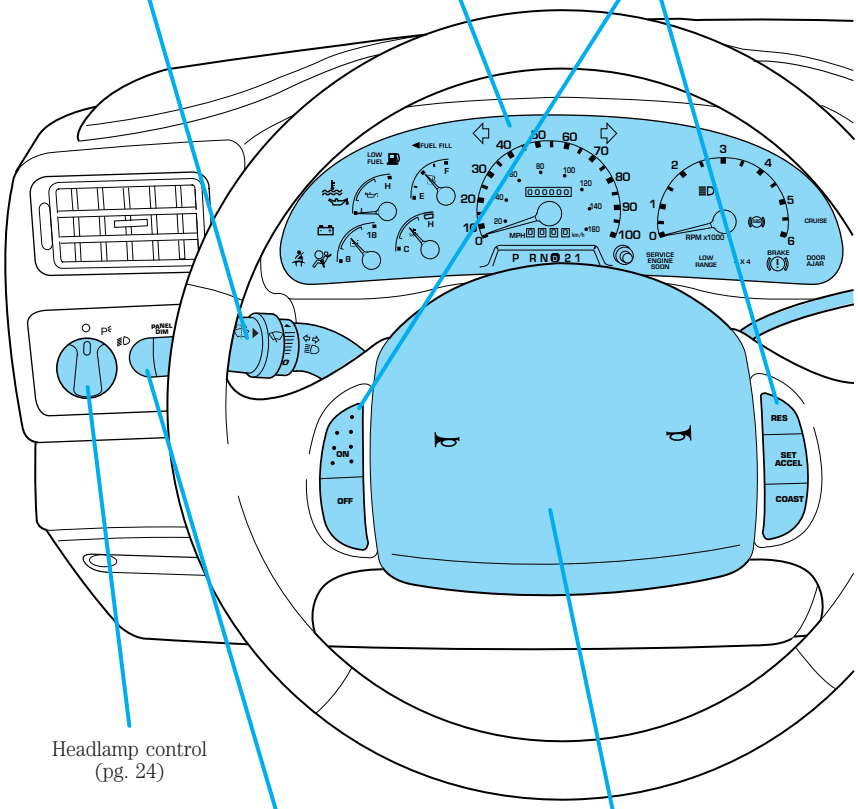
Vehicle Symbol Glossary

Safety Alert		See Owner's Guide	
Fasten Safety Belt		Air Bag-Front	
Air Bag-Side		Child Seat	
Child Seat Installation Warning		Child Seat Tether Anchorage	
Brake System		Anti-Lock Brake System	
Brake Fluid - Non-Petroleum Based		Traction Control	
Master Lighting Switch		Hazard Warning Flasher	
Fog Lamps-Front		Fuse Compartment	
Fuel Pump Reset		Windshield Wash/Wipe	
Windshield Defrost/Demist		Rear Window Defrost/Demist	
Power Windows Front/Rear		Power Window Lockout	

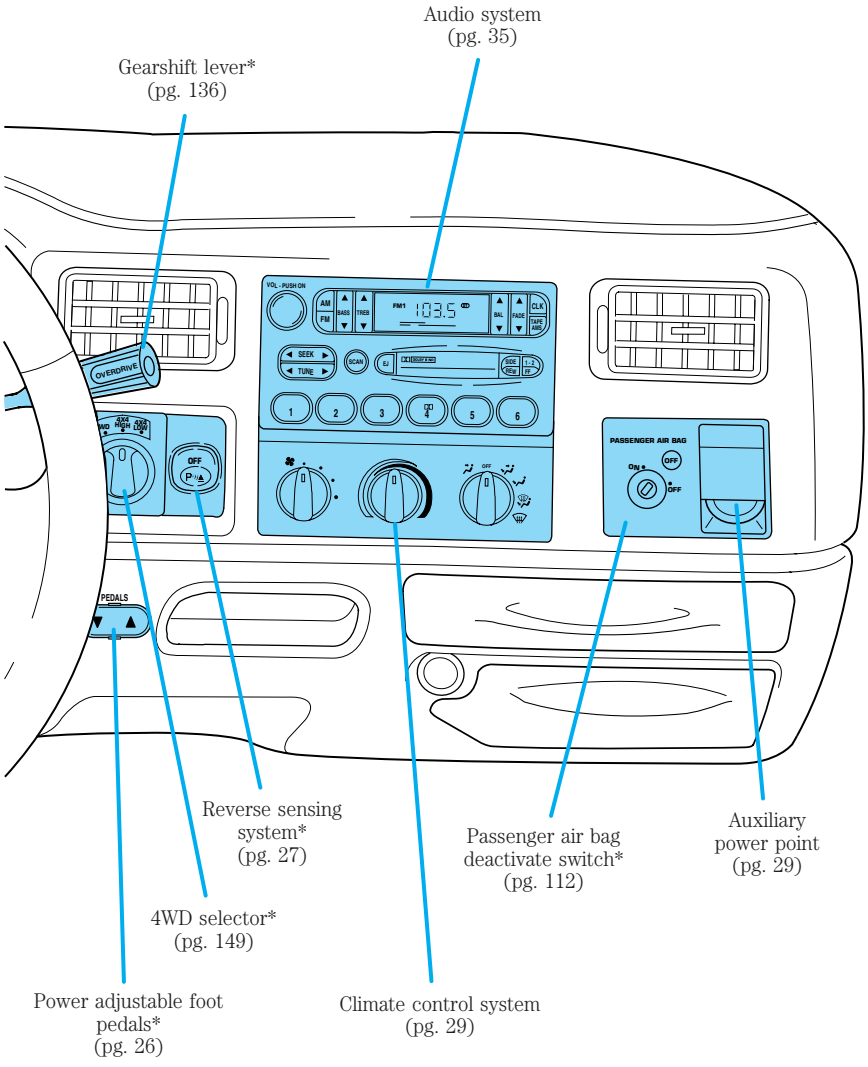
Vehicle Symbol Glossary

Child Safety Door Lock/Unlock		Interior Luggage Compartment Release Symbol	
Panic Alarm		Engine Oil	
Engine Coolant		Engine Coolant Temperature	
Do Not Open When Hot		Battery	
Avoid Smoking, Flames, or Sparks		Battery Acid	
Explosive Gas		Fan Warning	
Power Steering Fluid		Maintain Correct Fluid Level	
Emission System		Engine Air Filter	
Passenger Compartment Air Filter		Jack	
Check fuel cap			

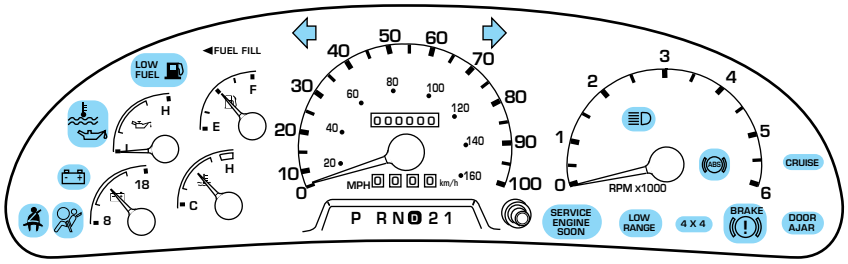
Instrumentation



* if equipped


Audio system
(pg. 35)
Gearshift lever*
(pg. 136)
Reverse sensing
system*
(pg. 27)
Passenger air bag
deactivate switch*
(pg. 112)
Auxiliary
power point
(pg. 29)
4WD selector*
(pg. 149)
Power adjustable foot
pedals*
(pg. 26)
Climate control system
(pg. 29)

WARNING LIGHTS AND CHIMES



Low fuel

Illuminates as an early reminder of a low fuel condition indicated on the fuel gauge (refer to *Fuel Gauge* in this chapter for more information). When refueling, after the light comes on, the amount of fuel that is added will be less than the advertised capacity since there is fuel still in the tank. The ignition must be in the ON position for this lamp to illuminate. The lamp will also illuminate for several seconds after the ignition is turned to the ON position regardless of the fuel level to ensure your bulb is working.

Service engine soon

Your vehicle is equipped with a computer that monitors the engine's emission control system. This system is commonly known as the On Board Diagnostics System (OBD II). The OBD II system protects the environment by ensuring that your vehicle continues to meet government emission standards. The OBD II system also assists the service technician in properly servicing your vehicle.

The *Service Engine Soon* indicator light illuminates when the ignition is first turned to the ON position to check the bulb. If it comes on after the engine is started, one of the engine's emission control systems may be malfunctioning. The light may illuminate without a driveability concern being noted. The vehicle will usually be drivable and will not require towing.

What you should do if the Service Engine Soon light illuminates

Light turns on solid:

This means that the OBD II system has detected a malfunction.

Temporary malfunctions may cause your *Service Engine Soon* light to illuminate. Examples are:

1. The vehicle has run out of fuel. (The engine may misfire or run poorly.)

2. Poor fuel quality or water in the fuel.

3. The fuel cap may not have been properly installed and securely tightened.

These temporary malfunctions can be corrected by filling the fuel tank with high quality fuel of the recommended octane and/or properly installing and securely tightening the gas cap. After three driving cycles without these or any other temporary malfunctions present, the *Service Engine Soon* light should turn off. (A driving cycle consists of a cold engine startup followed by mixed city/highway driving.) No additional vehicle service is required.

If the *Service Engine Soon* light remains on, have your vehicle serviced at the first available opportunity.

Light is blinking:

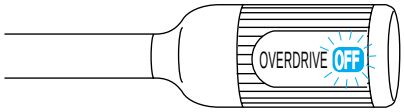
Engine misfire is occurring which could damage your catalytic converter. You should drive in a moderate fashion (avoid heavy acceleration and deceleration) and have your vehicle serviced at the first available opportunity.

Under engine misfire conditions, excessive exhaust temperatures could damage the catalytic converter, the fuel system, interior floor coverings or other vehicle components, possibly causing a fire.

Air bag readiness

Momentarily illuminates when the ignition is turned ON. If the light fails to illuminate, continues to flash or remains on, have the system serviced immediately.

Transmission control indicator light (TCIL)



Illuminates when the Transmission Control Switch (TCS), refer to *Overdrive control* in the *Controls and Features* chapter, has been pushed turning the transmission overdrive function OFF. When the TCIL (the word OFF on the gear shift) light is on, the transmission does not operate in the overdrive mode, refer to the *Driving* chapter for transmission function and operation.

The light may also flash steadily if a transmission malfunction is detected. If the light does not come on when the Transmission Control Switch is depressed or if the light flashes steadily, have your vehicle serviced as soon as possible, damage to the transmission could occur.

Safety belt

Momentarily illuminates when the ignition is turned to the ON position to remind you to fasten your safety belts. For more information, refer to the *Seating and safety restraints* chapter.

Brake system warning

Momentarily illuminates when the ignition is turned to the ON position to indicate a system check. Also illuminates if the parking brake is engaged. If the brake warning lamp does not illuminate at these times, seek service immediately. Illumination after releasing the parking brake indicates low brake fluid level and the brake system should be inspected immediately.

Anti-lock brake system (ABS)

Momentarily illuminates when the ignition is turned to the ON position to indicate a system check. If the light remains on, continues to flash or fails to illuminate, have the system serviced immediately. With the ABS light on, the anti-lock brake system is disabled and normal braking is still effective unless the brake warning light also remains illuminated with the parking brake released.

Turn signal

Illuminates when the left or right turn signal or the hazard lights are turned on. If one or both of the indicators stay on continuously or flash faster, check for a burned-out turn signal bulb. Refer to *Bulbs* in the *Maintenance and care* chapter.

High beams

Illuminates when the high beam headlamps are turned on.

Charging system

Illuminates when the ignition is turned to the ON position and the engine is off. The light also illuminates when the battery is not charging properly, requiring electrical system service.

Four wheel drive low (if equipped)

LOW
RANGE

Momentarily illuminates after the engine is STARTED. Illuminates when four-wheel drive low is engaged. If the light continues to flash have the system serviced.

Four wheel drive indicator (if equipped)

4x4

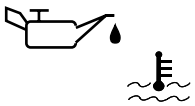
Momentarily illuminates after the engine is STARTED. Illuminates when 4x4 range is engaged. If the light continues to flash have the system serviced.

Door ajar

DOOR AJAR

Illuminates when the ignition is in the ON position and any door is open. It may also momentarily illuminate after the engine is started and all doors are closed.

Oil pressure/Engine coolant



This light will illuminate when the ignition is in the ON position and the:

- engine coolant temperature is very high
- engine oil pressure is low
- engine is off

The light serves as a notice that a system needs your attention and to check the engine coolant temperature gauge and the engine oil pressure gauge.

Refer to *Engine coolant temperature gauge* and *Engine oil pressure gauge* in this chapter for more information.

Speed control

CRUISE

This light comes on when either the COAST/SET or RES/ACCEL controls are pressed. It turns off when the speed control OFF control is pressed, the brake is applied or the ignition is turned to the OFF position.

Safety belt warning chime

Sounds to remind you to fasten your safety belts.

For information on the safety belt warning chime, refer to the *Seating and safety restraints* chapter.

Belt minder chime

Sounds intermittently to remind you to fasten your safety belts.

For information on the safety belt minder chime, refer to the *Seating and safety restraints* chapter.

Supplemental restraint system (SRS) warning chime

For information on the SRS warning chime, refer to the *Seating and safety restraints* chapter.

Key-in-ignition warning chime

Sounds when the ignition key is left in the ignition in the OFF/LOCK or ACC position and the driver's door is opened.

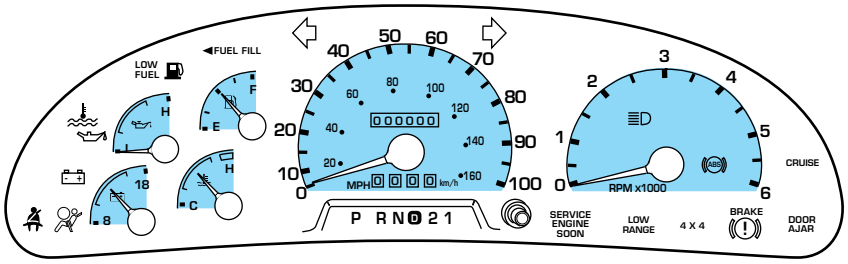
Headlamps on warning chime

Sounds when the headlamps or parking lamps are on, the ignition is off (and the key is not in the ignition) and the driver's door is opened.

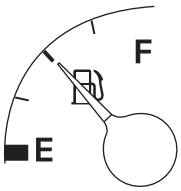
Parking brake ON warning chime

Sounds when the parking brake is set, the engine is running and the vehicle is driven more than 5 Km (3 mph).

GAUGES



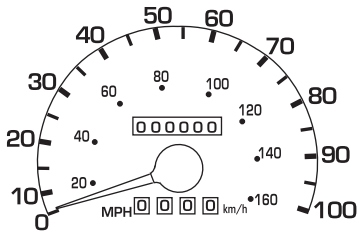
Fuel gauge



Displays approximately how much fuel is in the fuel tank (when the key is in the ON position). The fuel gauge may vary slightly when the vehicle is in motion or after refueling. The ignition should be in the OFF position while the vehicle is being refueled. When the gauge first indicates empty, there is a small amount of reserve fuel in the tank. When refueling the vehicle from an empty indication, the amount of fuel that can be added will be less than the advertised capacity due to the reserve fuel.

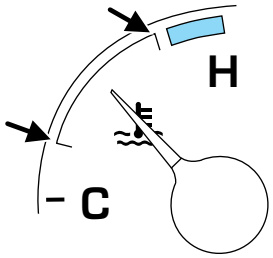
Speedometer

Indicates the current vehicle speed.



Engine coolant temperature gauge

Indicates the temperature of the engine coolant. At normal operating temperature, the needle remains within the normal area (the area between the “H” and “C”). If it enters the red section, the engine is overheating. Stop the vehicle as soon as safely possible, switch off the engine immediately and let the engine cool. Refer to *Engine coolant* in the *Maintenance and care* chapter.



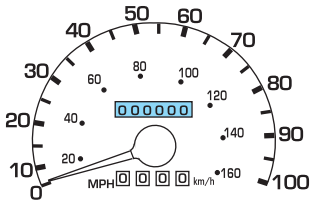
Never remove the coolant reservoir cap while the engine is running or hot.

This gauge indicates the temperature of the engine coolant, not the coolant level. If the coolant is not at its proper level the gauge indication will not be accurate.

Instrumentation

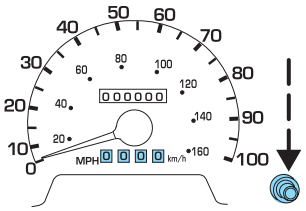
Odometer

Registers the total kilometers (miles) of the vehicle.



Trip odometer

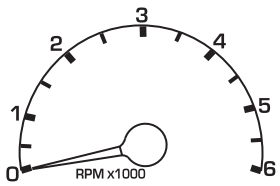
Registers the kilometers (miles) of individual journeys. To reset, depress the control.



Tachometer

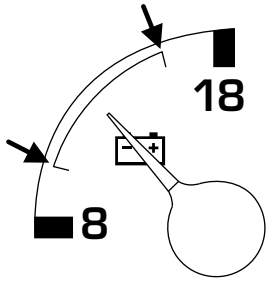
Indicates the engine speed in revolutions per minute.

Driving with your tachometer pointer at the top of the scale may damage the engine.



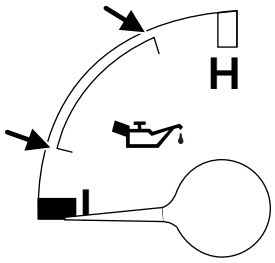
Battery voltage gauge

This shows the battery voltage when the ignition is in the ON position. If the pointer moves and stays outside the normal operating range (as indicated by arrows), have the vehicle's electrical system checked as soon as possible.



Engine oil pressure gauge

This shows the engine oil pressure in the system. Sufficient pressure exists as long as the needle remains in the normal range (the area between the "L" and "H").



If the gauge indicates low pressure, stop the vehicle as soon as safely possible and switch off the engine immediately. Check the oil level. Add oil if needed (refer to *Engine oil* in the *Maintenance and care* chapter). If the oil level is correct, have your vehicle checked at your dealership or by a qualified technician.

TRIP COMPUTER (IF EQUIPPED)

The trip computer tells you about the condition of your vehicle through a constant monitor of vehicle systems. You may select display features on the trip computer for a display of status.

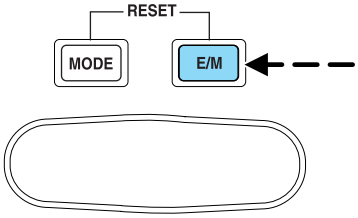
The appearance of your vehicle's trip computer may differ depending on your vehicle's option package, but the functions are the same.

The trip computer only operates with the ignition in the ON position. Trip computer features follow:

Selectable features

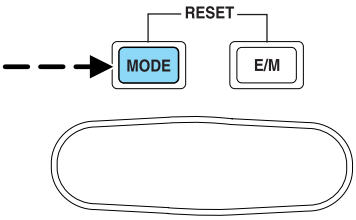
English/metric display

Press this control to change the trip computer display between metric and English units.



Mode control

Each press of the MODE control will display a different feature as follows:



Average fuel economy. The display will indicate the vehicle's average fuel economy in liters/100 km (or miles/gallon) since the average fuel economy was last reset.

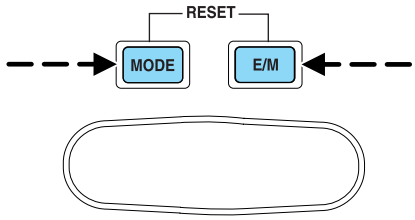
If you calculate your average fuel economy by dividing liters of fuel used by 100 kilometers traveled (miles traveled by gallons used), your figure may be different than displayed for the following reasons:

- your vehicle was not perfectly level during fill-up
- differences in the automatic shut-off points on the fuel pumps at service stations
- variations in top-off procedure from one fill-up to another
- rounding of the displayed values to the nearest liter (gallon)

To reset the average fuel economy:

1. Press the MODE control repeatedly until average fuel economy is displayed (this is the only resettable display).

2. Press the E/M and MODE controls simultaneously. The display will illuminate the “AVG” indicator. While the indicator is lit, release both controls to reset the average fuel economy.



Fuel range. This displays the approximate number of kilometers (miles) left to drive before the fuel tank is empty. The indicated distance to empty may be inaccurate:

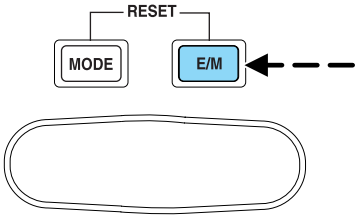
- with sustained, drastic changes in fuel economy (such as trailer towing), but will eventually recover.
- if the vehicle is started while parked on an incline.
- if less than 30 liters (8 gallons) of fuel is added to the fuel tank.

The fuel range function will flash for five seconds at the following distances based on fuel remaining and fuel economy calculations:

- 80 km (50 miles)
- 40 km (25 miles)
- 16 km (10 miles)

Outside air temperature

The temperature can be displayed in Centigrade or Fahrenheit by pressing the E/M control.



If the outside temperature falls below 3°C (38°F), the display will alternate from “ICE” to the outside temperature at a two second rate for one minute.

Off. In this mode the display is off.

Compass

The compass display is contained in the overhead console. The vehicle heading is displayed as one of N, NE, E, SE, S, SW, W and NW.

The compass heading is displayed in average fuel economy modes, fuel range modes and temperature modes.

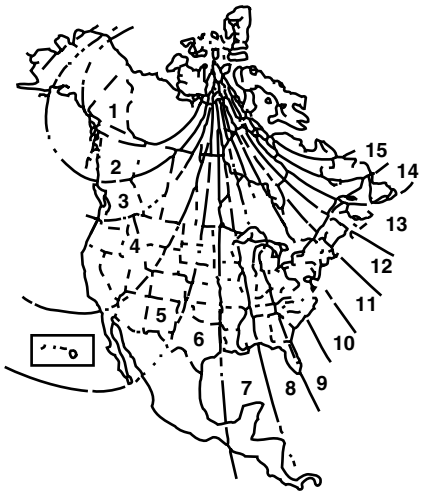
The compass reading may be affected when you drive near large buildings, bridges, power lines and powerful broadcast antenna. Magnetic or metallic objects placed in or on the vehicle may also affect compass accuracy. Adjustments may need to be made to the zone and calibration of the compass.

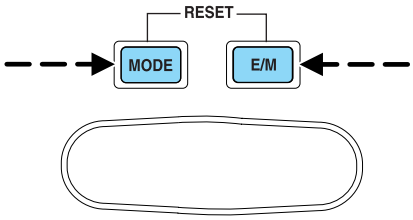
Compass zone adjustment

1. Determine which magnetic zone you are in for your geographic location by referring to the zone map.

2. Locate the trip computer on the overhead console.

3. Turn ignition to the ON position.





4. Press and hold both trip computer controls. After approximately four seconds, the trip computer will enter zone setting mode. Zone setting mode is indicated when the display lights the “ZONE” indicator.

5. Release both controls. Subsequent pressing of either control will increment the zone. Press the control repeatedly until the correct zone setting for your geographic location is displayed on the trip computer.

6. To exit the zone setting mode and save the displayed zone in memory, release both controls for greater than five seconds.

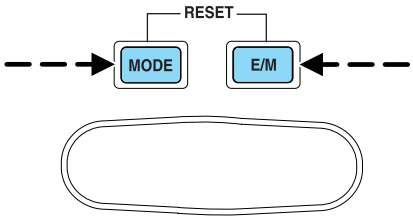
Compass calibration adjustment

Perform this adjustment in an open area free from steel structures and high voltage lines.

For optimum calibration, turn off all electrical accessories (heater/air conditioning, wipers, etc.) and make sure all vehicle doors are shut.

1. Locate the trip computer located in the overhead console.

2. Start the vehicle.



3. Press and hold both trip computer controls. After approximately eight seconds, the trip computer will enter CAL mode. CAL mode is indicated when the display lights the “CAL” indicator.

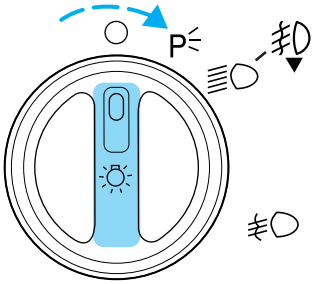
4. Release both controls. The display will return to normal, except that the CAL indicator will remain lit until the compass is sucessfully calibrated.

5. Slowly drive the vehicle in a circle (less than 5 km/h [3 mph]) until the CAL indicator turns off. It may take up to five circles to complete calibration.

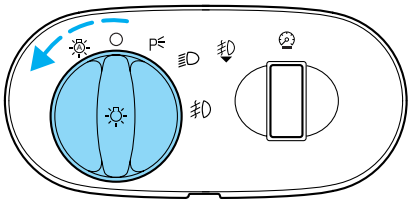
6. The compass is now calibrated.

HEADLAMP CONTROL

Rotate the headlamp control to the first position to turn on the parking lamps. Rotate to the second position to also turn on the headlamps.



Autolamp control (if equipped)



The autolamp system provides light sensitive automatic on-off control of the exterior lights normally controlled by the headlamp control.

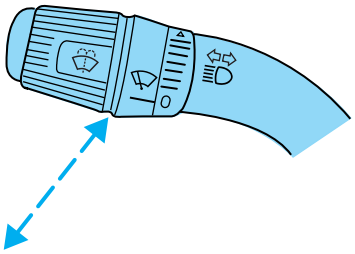
The autolamp system also keeps the lights on for approximately 20 seconds after the ignition switch is turned to OFF.

To program the autolamp feature, do the following:

1. Start with the ignition in OFF and the autolamps selected.
2. Deselect the autolamps.
3. Put the ignition in RUN.
4. Put the ignition in OFF.
5. Select the autolamps. Steps 2 through 5 must be performed within a 10 second period. At this point, the headlamps and parking lamps will turn on.
6. Deselect the autolamps after the desired autolamp delay time (maximum of 3 minutes). At this point, the headlamps and parking lamps will turn off.

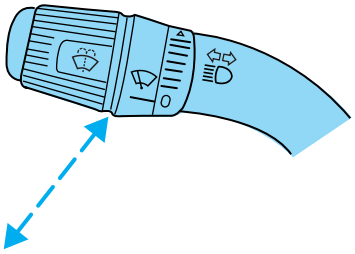
High beams

- Push forward to activate.
- Pull toward you to deactivate.



Flash to pass

Pull toward you to activate and release to deactivate.



Daytime running lamps (DRL) (if equipped)

Turns the headlamps on with a reduced output. To activate:

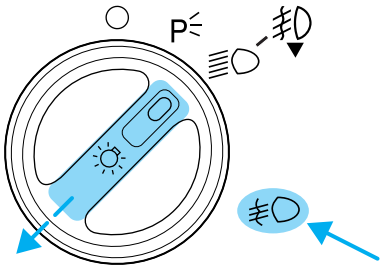
- the ignition must be in the ON position and
- the headlamp control is in the OFF or Parking lamps position.

Always remember to turn on your headlamps at dusk or during inclement weather. The Daytime Running Lamp (DRL) system does not activate with your tail lamps and generally may not provide adequate lighting during these conditions. Failure to activate your headlamps under these conditions may result in a collision.

Foglamp control (if equipped)

The headlamp control also operates the foglamps. The foglamps can be turned on only when the headlamp control is in the and position and the high beams are not turned on.

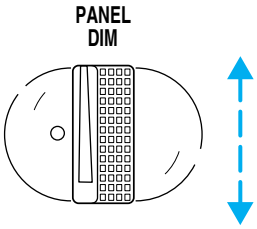
Pull headlamp control towards you to turn foglamps on. The foglamp indicator light will illuminate.



PANEL DIMMER CONTROL

Use to adjust the brightness of the instrument panel during headlamp and parklamp operation.

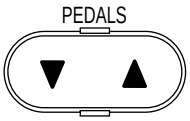
- Rotate up to brighten.
- Rotate down to dim.
- Rotate to full up position (past detent) to turn on interior lamps.
- Rotate to full down position (past detent) to turn off interior lamps.



POWER ADJUSTABLE FOOT PEDALS (IF EQUIPPED)

The accelerator and brake pedal should only be adjusted when the vehicle is stopped and the gearshift lever is in the P(Park) position.

Press and hold the rocker control to adjust accelerator and brake pedal.



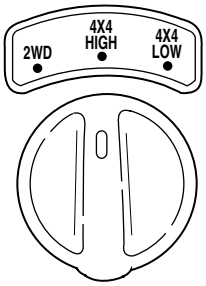
- Press the left side of the control to adjust the pedals toward you.
- Press the right side of the control to adjust the pedals away from you.

The adjustment allows for approximately 76 mm (3 inches) of maximum travel.

Never adjust the accelerator and brake pedal with feet on pedals or while the vehicle is moving.

4WD CONTROL (IF EQUIPPED)

This control operates the 4WD. Refer to the *Driving* chapter for more information.



REVERSE SENSING SYSTEM (IF EQUIPPED)

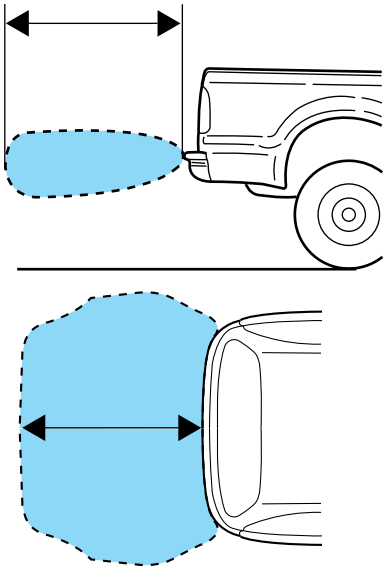
The reverse sensing system (RSS) sounds a tone to warn the driver of obstacles near the rear bumper when the reverse gear is selected.

To help avoid personal injury, please read and understand the limitations on the reverse sensing system described below. Reverse sensing is only an assist for some (generally large and fixed) objects when moving in reverse on a flat surface at "parking speeds" of approximately 6 km/h (4 mph) or less. The weather may also affect the function of RSS. RSS may have reduced performance, or be activated in inclement weather. It is the driver's responsibility for ensuring that their path is clear when operating the vehicle.

To help avoid personal injury, always use caution when in reverse and when using the reverse sensing system.

This system is not designed to prevent contact with small or moving objects. The system is designed to provide a warning to assist the driver in detecting large stationary objects to avoid damaging the vehicle. The system may not detect smaller objects, particularly those close to the ground.

The RSS will assist the driver in detecting certain objects while the vehicle slowly moves in reverse at speeds less than 6 km/h (4 mph). The RSS is not effective at speeds greater than 6 km/h (4 mph) and may not detect certain angular or moving objects.



The reverse sensing system detects obstacles within approximately 1.8 meters (5.9 ft.) of the rear bumper with a decreased coverage area at the outer corners of the bumper, (refer to the figures for approximate zone coverage areas). As you move closer to the obstacle, the rate of the tone increases. When the distance to the obstacle is less than 25.0 cm (10 in.), the tone will sound continuously. If the system detects a stationary or receding object further than 25.0 cm (10 in.) from the side of the vehicle, the tone will sound for only three seconds. Once the system detects an object approaching, the tone will sound again.

The reverse sensing system is automatically enabled when the gear selector is placed in R (Reverse) and the ignition is ON. A reverse sensing control allows the driver to disable the reverse sensing system only when the ignition is ON, and the gear selector is in R (Reverse).

The OFF indicator remains illuminated when the system is disabled. The system defaults to ON every time the reverse gear is selected. Press the control to disable or enable the system.

The indicator will remain illuminated to indicate a failure of the reverse sensing system.

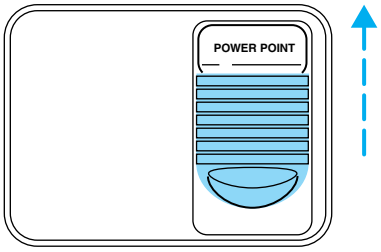
The reverse sensing system may have reduced performance or an increased chance of false detection if the tailgate is not locked in the vertical position. When the tailgate is down, the driver may experience a continuous or intermittent tone. This also applies if items being hauled in the box do not fit entirely inside and protrude rearward.

Always keep the sensors (located on the rear bumper/fascia) free from dirt, snow and ice (do not clean the sensors with sharp objects). These elements may cause the system to operate inaccurately.

If the vehicle sustains damage to the rear bumper/fascia, leaving it misaligned or bent, the sensing zone may be altered causing inaccurate measurement of obstacles or false alarms.

AUXILIARY POWER POINT 12V

Power outlets are designed for accessory plugs only. Do not hang any type of accessory or accessory bracket from the plug. Improper use of the power outlet can cause damage not covered by your warranty.

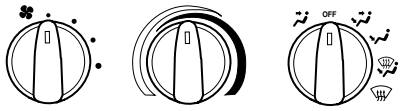


The auxiliary power point is located on the instrument panel.

Do not plug optional electrical accessories into the cigarette lighter. Use the power point.

CLIMATE CONTROL SYSTEM

Heater only system (if equipped)

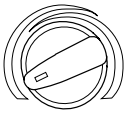


Fan speed control

Controls the volume of air circulated in the vehicle.

Temperature control

Controls the temperature of the airflow inside the vehicle. On heater-only systems, the air cannot be cooled below the outside temperature.



Mode selector control

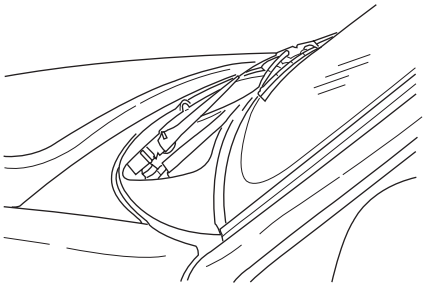
Controls the direction of the airflow to the inside of the vehicle.

- (Panel) -Distributes outside air through the instrument panel registers.
- OFF-Outside air is shut out and the fan will not operate. For short periods of time only, use this mode to prevent undesirable odors from entering the vehicle.
- (Panel and floor) -Distributes outside air through the instrument panel registers and the floor ducts.
- (Floor) -Allows for maximum heating. Distributes outside air through the floor ducts.
- (Floor and defrost) -Distributes outside air through the floor ducts and the windshield defroster ducts.
- (Defrost) -Distributes outside air through the windshield defroster ducts. It can be used to clear ice or fog from the windshield.

Operating tips

- In humid weather conditions, place the climate control system in DEF before driving. This will reduce fogging on your windshield. Once the windshield has been cleared, operate the climate control system as desired.
- To reduce humidity buildup inside the vehicle in cold weather conditions, don't drive with the climate control system in the OFF position.
- Under normal weather conditions, your vehicle's climate control system should be left in any position other than MAX A/C or OFF when the vehicle is parked. This allows the vehicle to "breathe" through the outside air inlet duct.

- Under snowy or dirty weather conditions, your vehicle's climate control system should be left in the OFF position when the vehicle is parked. This allows the climate control system to be free from contamination of outside pollutants.
- Do not put objects under the front seat that will interfere with the airflow to the rear seats (if equipped).
- Remove any snow, ice or leaves from the air intake area at the base of the windshield.



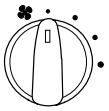
- Do not place objects over the defroster outlets. These objects may block airflow and reduce visibility through the windshield. Avoid placing small objects on top of the instrument panel. These objects may fall down into the defroster outlets and block airflow, in addition to damaging the climate control system.

Do not place objects on top of the instrument panel, as these objects may become projectiles in a collision or a sudden stop.

Manual heating and air conditioning system

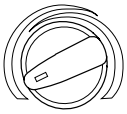
Fan speed control

Controls the volume of air circulated in the vehicle.



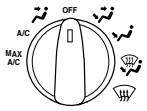
Temperature control knob

Controls the temperature of the airflow inside the vehicle.



Mode selector control

Controls the direction of the airflow to the inside of the vehicle.



The air conditioning compressor can operate in all modes except and . However, the air conditioning will only function if the outside temperature is about 6°C (43°F) or higher.

Since the air conditioner removes considerable moisture from the air during operation, it is normal if clear water drips on the ground under the air conditioner drain while the system is working and even after you have stopped the vehicle.

- MAX A/C-Uses recirculated air to cool the vehicle. MAX A/C is noisier than A/C but more economical and will cool the inside of the vehicle faster. Airflow will be from the instrument panel registers. This mode can also be used to prevent undesirable odors from entering the vehicle.
- A/C-Uses outside air to cool the vehicle. It is quieter than MAX A/C but not as economical. Airflow will be from the instrument panel registers.
- (Panel) -Distributes outside air through the instrument panel registers. However, the air will not be cooled below the outside temperature because the air conditioning does not operate in this mode.
- OFF-Outside air is shut out and the fan will not operate. For short periods of time only, use this mode to prevent undesirable odors from entering the vehicle.
- (Panel and floor) -Distributes outside air through the instrument panel registers and the floor ducts. Heating and air conditioning capabilities are provided in this mode. For added customer comfort, when the temperature control knob is anywhere in between the full

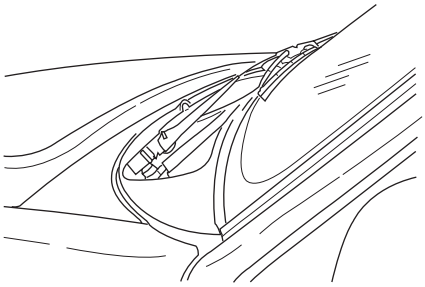
hot and full cold positions, the air distributed through the floor ducts will be slightly warmer than the air sent to the instrument panel registers.

- (Floor) -Allows for maximum heating by distributing outside air through the floor ducts. However, the air will not be cooled below the outside temperature because the air conditioning does not operate in this mode.
- (Floor and defrost) -Distributes outside air through the windshield defroster ducts and the floor ducts. Heating and air conditioning capabilities are provided in this mode. For added customer comfort, the air distributed through the floor ducts will be slightly warmer than the air sent to the windshield defroster ducts. If the temperature is about 6°C (43°F) or higher, the air conditioner will automatically dehumidify the air to reduce fogging.
- (Defrost) -Distributes outside air through the windshield defroster ducts. It can be used to clear ice or fog from the windshield. If the temperature is about 6°C (43°F) or higher, the air conditioner will automatically dehumidify the air to reduce fogging.

Operating tips

- In humid weather conditions, place the climate control system in DEF before driving. This will reduce fogging on your windshield. Once the windshield has been cleared, operate the climate control system as desired.
- To reduce humidity buildup inside the vehicle in cold weather conditions, don't drive with the climate control system in the OFF or MAX A/C position.
- To reduce humidity buildup inside the vehicle in warm weather conditions, don't drive with the climate control system in the OFF position.
- Under normal weather conditions, your vehicle's climate control system should be left in any position other than MAX A/C or OFF when the vehicle is parked. This allows the vehicle to "breathe" through the outside air inlet duct.
- Under snowy or dirty weather conditions, your vehicle's climate control system should be left in the OFF position when the vehicle is parked. This allows the climate control system to be free from contamination of outside pollutants.

- If your vehicle has been parked with the windows closed during warm weather conditions, the air conditioner will perform more efficiently in cooling the vehicle if driven for two or three minutes with the windows open. This will force most of the hot, stale air out of the vehicle. Once the vehicle has been “aired out”, operate the climate control system as desired.
- Do not put objects under the front seat that will interfere with the airflow to the rear seats (if equipped).
- Remove any snow, ice or leaves from the air intake area at the base of the windshield.



- Do not place objects over the defroster outlets. These objects can block airflow and reduce your ability to see through your windshield. Avoid placing small objects on top of the instrument panel. These objects may fall down into the defroster outlets and block airflow, in addition to damaging the climate control system.

Do not place objects on top of the instrument panel, as these objects may become projectiles in a collision or sudden stop.

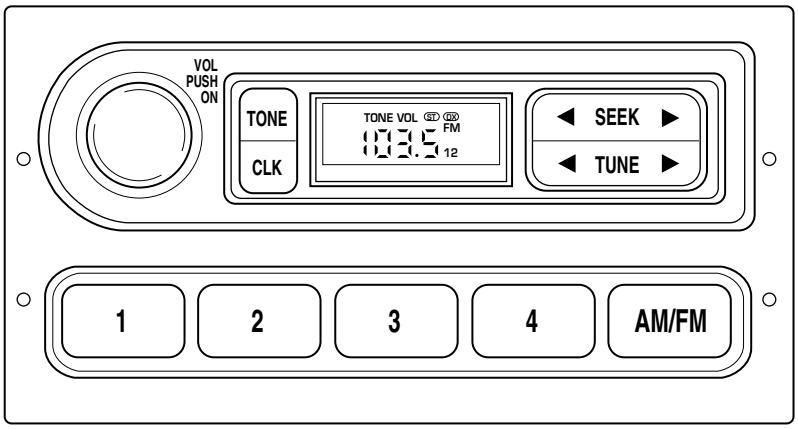
To aid in side window defogging/demisting in cold weather conditions:

1. Select PANEL & FLOOR
2. Set the temperature control to full heat
3. Set the fan speed to HI
4. Direct the outer panel vents towards to side windows

To increase airflow to the outer panel vents, close the central panel vents.

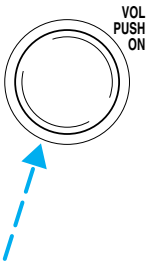
USING YOUR AUDIO SYSTEM

AM/FM Stereo

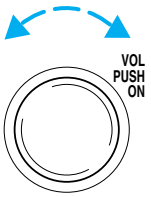


Volume/power control

Press the control to turn the audio system on or off.



Turn the control to raise or lower volume.



If the volume is set above a certain level and the ignition is turned off, the volume will come back on at a “nominal” listening level when the ignition switch is turned back on.

AM/FM select

The AM/FM select control works in radio mode.

AM/FM select in radio mode

This control allows you to select AM or FM frequency bands. Press the control to switch between AM, FM1 or FM2 memory preset stations.

Tune adjust

The tune control works in radio mode.

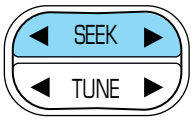
Tune adjust in radio mode

- Press ◀ to move to the next frequency down the band (whether or not a listenable station is located there). Hold the control to move through the frequencies quickly.
- Press ▶ to move to the next frequency up the band (whether or not a listenable station is located there). Hold for quick movement.

Seek function

The seek function control works in radio mode.

Seek function in radio mode



- Press ◀ to find the next listenable station down the frequency band.
- Press ▶ to find the next listenable station up the frequency band.

Radio station memory preset

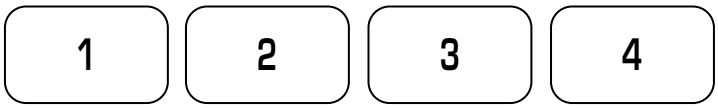
The radio is equipped with four station memory preset controls. These controls can be used to select up to four preset AM stations and eight FM stations (four in FM1 and four in FM2).

Setting memory preset stations

1. Select the frequency band with the AM/FM select control.

2. Select a station. Refer to *Tune adjust* or *Seek function* for more information on selecting a station.

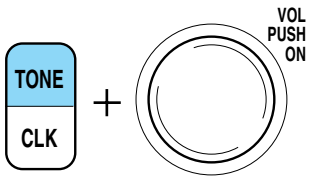
3. Press and hold a memory preset control until the sound returns, indicating the station is held in memory on the control you selected.



Bass adjust

The bass adjust control allows you to increase or decrease the audio system's bass output.

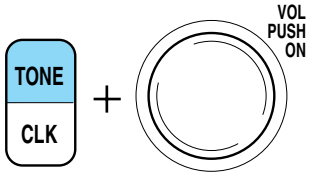
Press the TONE control once, then use the volume knob to adjust the desired level.



Treble adjust

The treble adjust control allows you to increase or decrease the audio system's treble output.

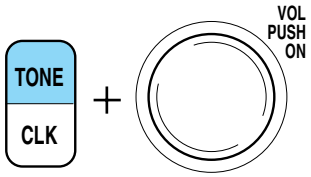
Press the TONE control twice, then use the volume knob to adjust the desired level.



Speaker balance adjust

Speaker sound distribution can be adjusted between the right and left speakers.

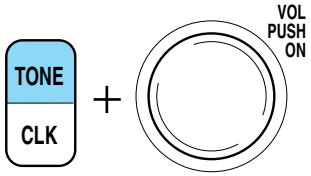
Press the TONE control three times, then use the volume knob to adjust the desired level.



Speaker fade adjust (if equipped)

Speaker sound can be adjusted between the front and rear speakers.

Press the TONE control four times, then use the volume knob to adjust the desired level.

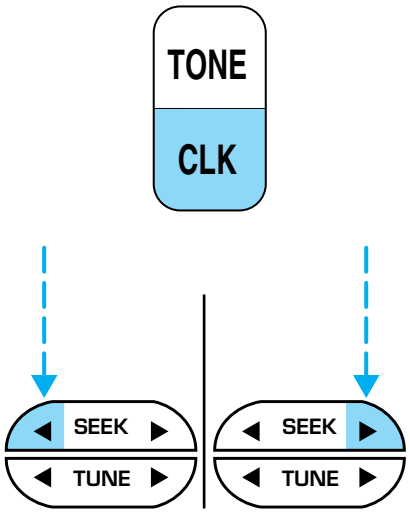


Setting the clock

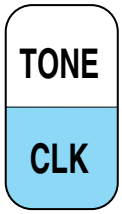
Press CLK to toggle between listening frequencies and clock mode.

To set the hour, press and hold the CLK control until CLOCK SET appears in the display and press the SEEK control:

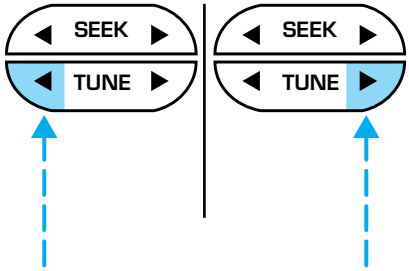
- ◀ to decrease hours and
- ▶ to increase hours.



To set the minute, press and hold the CLK control until CLOCK SET appears in the display and press the TUNE control:

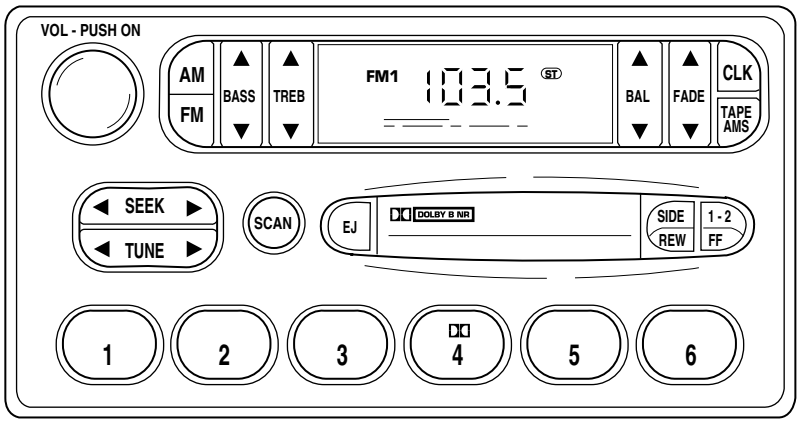


- ◀ to decrease minutes and
- ▶ to increase minutes.



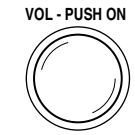
The CLK control will allow you to switch between media display mode (radio station, stereo information, etc.) and clock display mode (time). When in clock mode, the media information will display for ten seconds, when the radio is turned on, and then revert to clock information. Any time that the media is changed, (new radio station, etc.), the media information will again display for ten seconds before reverting back to the clock. In media mode, the media information will always be displayed.

AM/FM stereo cassette



Volume/power control

Press the control to turn the audio system on or off.

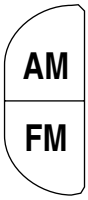


Turn the control to raise or lower volume.

If the volume is set above a certain level and the ignition is turned off, the volume will come back on at a “nominal” listening level when the ignition switch is turned back on.

AM/FM select

The AM/FM select control works in radio and tape modes.



AM/FM select in radio mode

This control allows you to select AM or FM frequency bands. Press the AM control to select from AM selections, and press the FM control to select from FM1 or FM2 memory preset stations.

AM/FM select in tape mode

Press this control to stop tape play and begin radio play.

Tune adjust

The tune control works in radio mode.

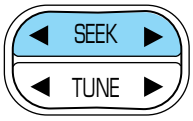
Tune adjust in radio mode

- Press ◀ to move to the next frequency down the band (whether or not a listenable station is located there). Hold the control to move through the frequencies quickly.
- Press ▶ to move to the next frequency up the band (whether or not a listenable station is located there). Hold for quick movement.

Seek function

The seek function control works in radio mode.

Seek function in radio mode



- Press ◀ to find the next listenable station down the frequency band.
- Press ▶ to find the next listenable station up the frequency band.

Scan function

The scan function works in radio mode.

Scan function in radio mode

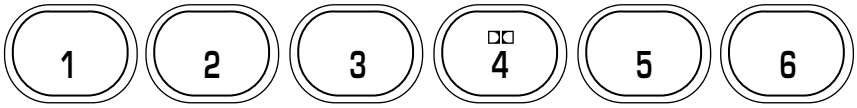
Press the SCAN control to hear a brief sampling of all listenable stations on the frequency band. Press the SCAN control again to stop the scan mode.

Radio station memory preset

The radio is equipped with six station memory preset controls. These controls can be used to select up to six preset AM stations and twelve FM stations (six in FM1 and six in FM2).

Setting memory preset stations

1. Select the frequency band with the AM or the FM select control.
2. Select a station. Refer to *Tune adjust* or *Seek function* for more information on selecting a station.
3. Press and hold a memory preset control until the sound returns, indicating the station is held in memory on the control you selected.



Bass adjust

The bass adjust control allows you to increase or decrease the audio system's bass output.

Treble adjust

The treble adjust control allows you to increase or decrease the audio system's treble output.

Speaker balance adjust

Speaker sound distribution can be adjusted between the right and left speakers.

Speaker fade adjust

Speaker sound can be adjusted between the front and rear speakers.

Tape select

- To enter tape mode while in radio mode, press the TAPE AMS control.

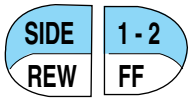
Automatic Music Search

The Automatic Music Search feature allows you to quickly locate the beginning of the tape selection being played or to skip to the next selection.

To activate the feature, momentarily depress the TAPE AMS button. Then, press either REW (for the beginning of the current selection) or FF (to advance to the next selection). The tape deck stops and returns to play mode when the AMS circuit senses a blank section on the tape.

In order to ensure proper operation of the AMS feature, the tape MUST have a blank section of at least four seconds duration between programs.

Tape direction select

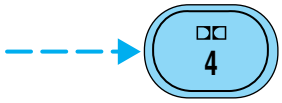


Press SIDE and 1–2 at the same time to play the alternate side of a tape.

Eject function

Press the control to stop and eject a tape.

Dolby® noise reduction



Dolby® noise reduction operates only in tape mode. Dolby® noise reduction reduces the amount of hiss and static during tape playback.

Press the control to activate (and deactivate) Dolby® noise reduction.

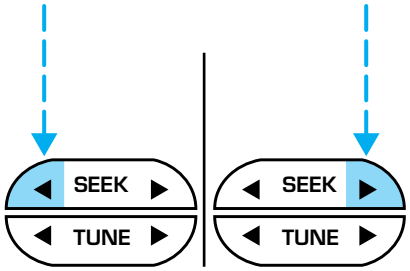
Dolby® noise reduction is manufactured under license from Dolby® Laboratories Licensing Corporation. “Dolby®” and the double-D symbol are registered trademarks of Dolby Laboratories Licensing Corporation.

Setting the clock

Press CLK to toggle between listening frequencies and clock mode while in radio mode.

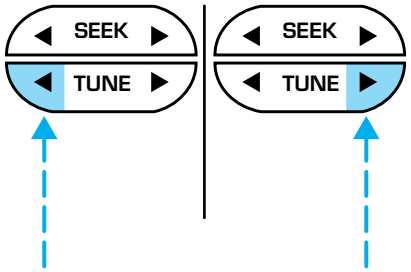
To set the hour, press and hold the CLK control and press the SEEK control:

- ◀ to decrease hours and
- ▶ to increase hours.



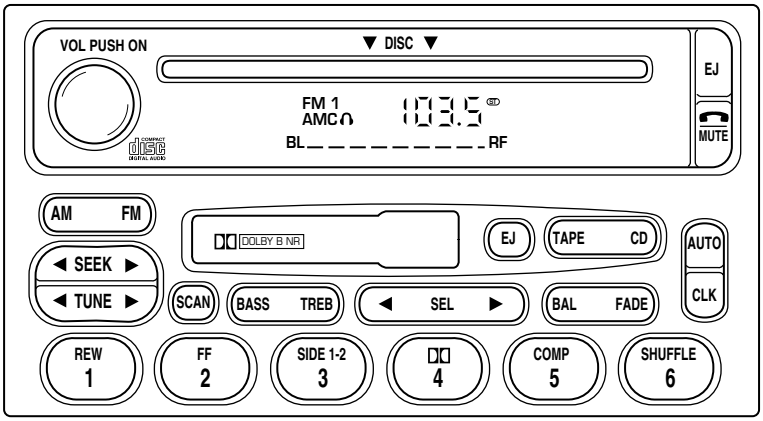
To set the minute, press and hold the CLK control and press the TUNE control:

- ◀ to decrease minutes and
- ▶ to increase minutes.



The CLK control will allow you to switch between media display mode (radio station, stereo information, etc.) and clock display mode (time). When in clock mode, the media information will display for 10 seconds, when the radio is turned on, and then revert to clock information. Any time that the media is changed, (new radio station, etc.), the media information will again display for 10 seconds before reverting back to the clock. In media mode, the media information will always be displayed.

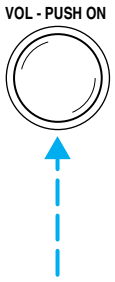
Premium AM/FM Stereo/Cassette/Single CD



Volume/power control

Press the control to turn the audio system on or off.

Audio power can also be turned on by pressing the AM/FM select control or the tape/CD select control. Audio power is turned off by using the volume/power control.

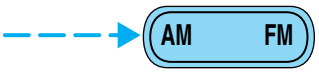


Turn control to raise or lower volume.

If the volume is set above a certain level and the ignition is turned off, the volume will come back on at a “nominal” listening level when the ignition switch is turned back on.

AM/FM select

The AM/FM select control works in radio, tape and CD modes.



AM/FM select in radio mode

This control allows you to select AM or FM frequency bands. Press the control to switch between AM, FM1 or FM2 memory preset stations.

AM/FM select in tape mode

Press this control to stop tape play and begin radio play.

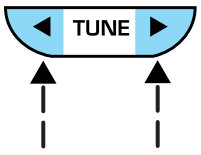
AM/FM select in CD or CD changer mode (if equipped)

Press this control to stop CD play and begin radio play.

Tune adjust

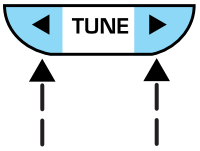
The tune control works in radio or CD changer mode.

Tune adjust in radio mode



- Press ◀ to move to the next frequency down the band (whether or not a listenable station is located there). Hold the control to move through the frequencies quickly.
- Press ▶ to move to the next frequency up the band (whether or not a listenable station is located there). Hold for quick movement.

Tune adjust for CD changer (if equipped)

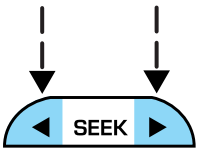


- Press ◀ to select the previous disc in the CD changer. (Play will begin on the first track of the disc unless the CD changer is in shuffle mode. Refer to *Shuffle feature* for more information. Hold the control to continue reversing through the remaining discs.
- Press ▶ to select the next disc in the CD changer. Hold the control to fast-forward through the remaining discs.

Seek function

The seek function control works in radio, tape or CD mode.

Seek function in radio mode

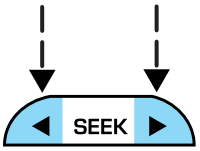


- Press ◀ to find the next listenable station down the frequency band.
- Press ▶ to find the next listenable station up the frequency band.

Seek function in tape mode

- Press ◀ to listen to the previous selection on the tape.
- Press ▶ to listen to the next selection on the tape.

Seek function for CD or CD changer (if equipped)



- Press ◀ to seek to the previous track of the current disc. If a selection has been playing for three seconds or more and you press ◀ , the CD changer will replay that selection from the beginning.
- Press ▶ to seek forward to the next track of the current disc. After the last track has been completed, the first track of the current disc will automatically replay.

Scan function

The scan function works in radio, tape or CD mode.

Scan function in radio mode

Press the SCAN control to hear a brief sampling of all listenable stations on the frequency band. Press the control again to stop the scan mode.

Scan function in tape mode

Press the SCAN control to hear a short sampling of all selections on the tape. (The tape scans in a forward direction. At the end of the tape's first side, direction automatically reverses to the opposite side of the tape.) To stop on a particular selection, press the control again.

Scan function in CD or CD changer mode (if equipped)

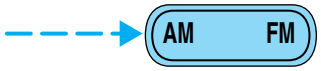
Press the SCAN control to hear a short sampling of all selections on the CD. (The CD scans in a forward direction, wrapping back to the first track at the end of the CD.) To stop on a particular selection, press the control again.

Radio station memory preset

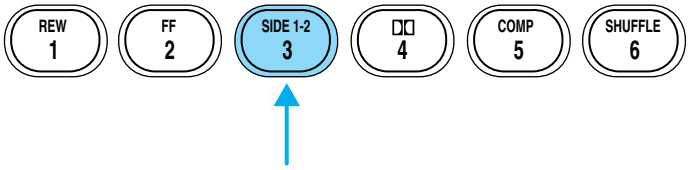
The radio is equipped with six station memory preset controls. These controls can be used to select up to six preset AM stations and twelve FM stations (six in FM1 and six in FM2).

Setting memory preset stations

1. Select the frequency band with the AM/FM select control.



2. Select a station. Refer to *Tune adjust* or *Seek function* for more information on selecting a station.



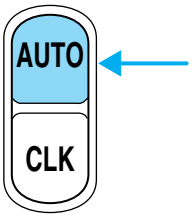
3. Press and hold a memory preset control until the sound returns, indicating the station is held in memory on the control you selected.

Autoset memory preset

Autoset allows you to set strong radio stations without losing your original manually set preset stations. This feature is helpful on trips when you travel between cities with different radio stations.

Starting autoset memory preset

1. Select a frequency using the AM/FM select controls.
2. Press the AUTO control.
3. When the first six strong stations are filled, the station stored in memory preset control 1 will start playing.



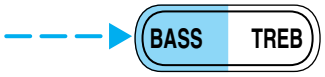
If there are less than six strong stations available on the frequency band, the remaining memory preset controls will all store the last strong station available.

These stations are temporarily stored in the memory preset controls (until deactivated) and are accessed in the same manner as your original presets.

To deactivate autoset and return to your audio system's manually set memory stations, press the AUTO control again.

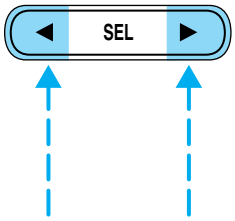
Bass adjust

The bass adjust control allows you to increase or decrease the audio system's bass output.



Press the BASS control then press:

- ◀ to decrease the bass output and
- ▶ to increase the bass output.

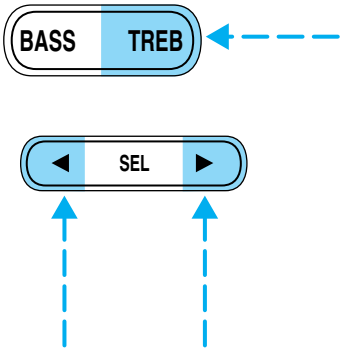


Treble adjust

The treble adjust control allows you to increase or decrease the audio system's treble output.

Press the TREB control then press:

- ◀ to decrease the treble output and
- ▶ to increase the treble output.

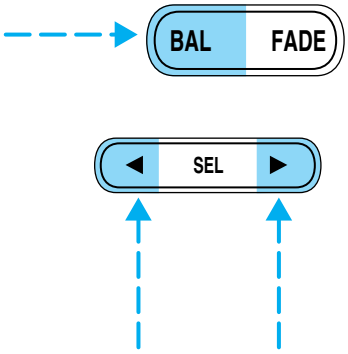


Speaker balance adjust

Speaker sound distribution can be adjusted between the right and left speakers.

Press the BAL control then press:

- ◀ to shift sound to the left and
- ▶ to shift sound to the right.

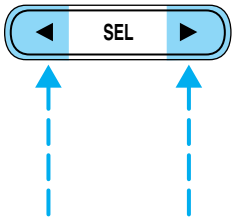


Speaker fade adjust

Speaker sound can be adjusted between the front and rear speakers.

Press the FADE control then press:

- ▶ to shift the sound to the front and
- ◀ to shift the sound to the rear.



Tape/CD select

- To begin tape play (with a tape loaded into the audio system) while in the radio or CD mode, press the TAPE control. Press the button during rewind or fast forward to stop the rewind or fast forward function.

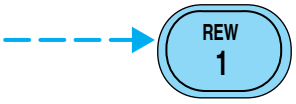
- To begin CD play (if CD(s) are loaded), press the CD control. The first track of the disc will begin playing. If returning from radio or tape mode, CD play will begin where it stopped last.

With the dual media audio system, press the CD control to toggle between single CD and CD changer play (if equipped).

Do not insert any promotional (odd shaped or sized) discs, or discs with removable labels into the CD player as jamming may occur.

Rewind

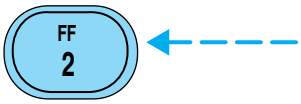
The rewind control works in tape and CD modes.



- In tape mode, radio play will continue until rewind is stopped (with the TAPE control) or the beginning of the tape is reached.
- In CD mode, pressing the REW control rewinds the CD within the current track.

Fast forward

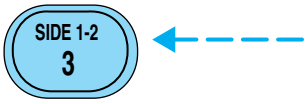
The fast forward control works in tape and CD modes.



- In the tape mode, tape direction will automatically reverse when the end of the tape is reached.
- In CD mode, pressing the control fast forwards the CD within the current track.

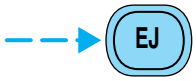
Tape direction select

Press SIDE 1–2 to play the alternate side of a tape.

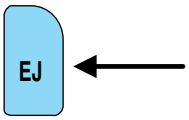


Eject function

Press the EJ control to stop and eject a tape.

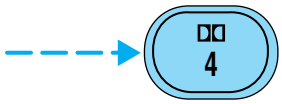


Press the EJ control to stop and eject a CD.



Dolby® noise reduction

Dolby® noise reduction operates in tape mode. Dolby® noise reduction reduces the amount of hiss and static during tape playback.

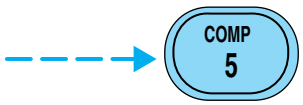


Press the control to activate (and deactivate) the Dolby® noise reduction.

Dolby® noise reduction is manufactured under license from Dolby® Laboratories Licensing Corporation. “Dolby®” and the double-D symbol are registered trademarks of Dolby® Laboratories Licensing Corporation.

Compression adjust

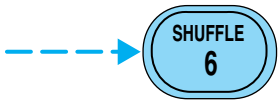
Compression adjust brings soft and loud CD passages together for a more consistent listening level.



Press the COMP control to activate and deactivate compression adjust.

Shuffle feature

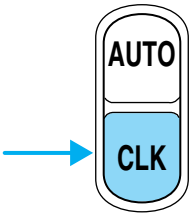
The shuffle feature operates in CD mode (if equipped) and plays all tracks on the current disc in random order. If equipped with the CD changer, the shuffle feature continues to the next disc after all tracks on the current disc are played.



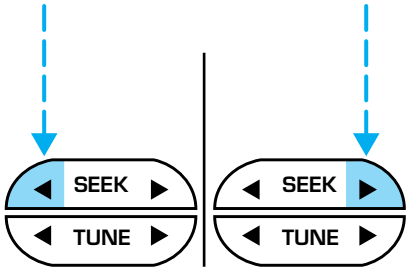
Press the SHUFFLE control to start this feature. Random order play will continue until the SHUFFLE control is pressed again.

Setting the clock

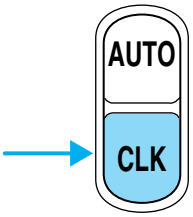
To set the hour, press and hold the CLK control and press SEEK:



- ◀ to decrease hours and
- ▶ to increase hours.

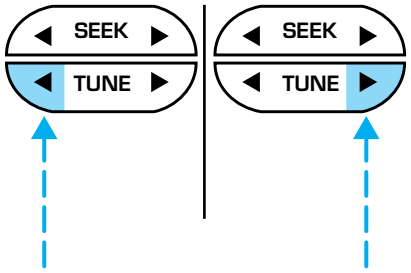


To set the minute, press and hold the CLK control and press TUNE:

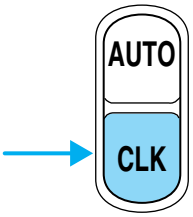


- ◀ to decrease minutes and
- ▶ to increase minutes.

If your vehicle has a separate clock module, (other than the digital radio display), the CLK button will not function in the above manner.

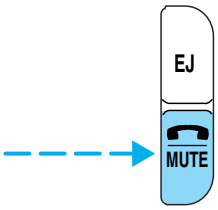


The CLK button will allow you to switch between media display mode (radio station, stereo information, etc.) and clock display mode (time). When in clock mode, the media information will display for 10 seconds, when the radio is turned on, and then revert to clock information. Any time that the media is changed, (new radio station, etc.), the media information will again display for 10 seconds before reverting back to the clock. In media mode, the media information will always be displayed.

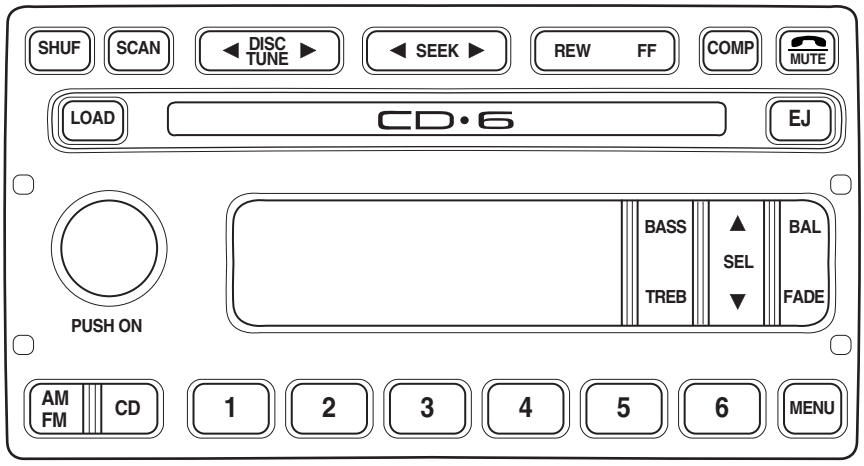


Mute mode

Press the MUTE control to mute the playing media. Press the MUTE control again to return to the playing media.

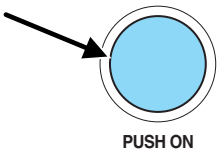


Premium AM/FM Stereo In Dash Six CD Radio

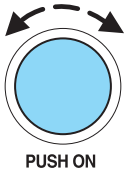


Volume/power control

Press the control to turn the audio system on or off.



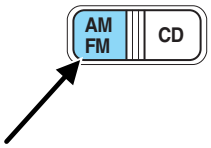
Turn the control to raise or lower volume.



If the volume is set above a certain level and the ignition is turned off, the volume will come back on at a “nominal” listening level when the ignition switch is turned back on.

AM/FM select

The AM/FM select control works in radio and CD modes.



AM/FM select in radio mode

This control allows you to select AM or FM frequency bands. Press the control to switch between AM, FM1 or FM2 memory preset stations.

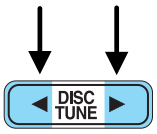
AM/FM select in CD mode

Press this control to stop CD play and begin radio play.

Tune adjust

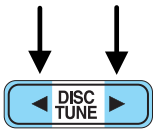
The tune control works in radio or CD mode.

Tune adjust in radio mode



- Press ◀ to move to the next frequency down the band (whether or not a listenable station is located there). Hold the control to move through the frequencies quickly.
- Press ▶ to move to the next frequency up the band (whether or not a listenable station is located there). Hold for quick movement.

Tune adjust for CD mode



- Press ◀ to select the previous disc. (Play will begin on the first track of the disc unless shuffle mode is engaged.) Refer to *Shuffle feature* for more information. Hold the control to continue reversing through the discs.
- Press ▶ to select the next disc. Hold the control to fast-forward through the remaining discs.

Seek function

The seek function works in radio or CD mode.

Seek function in radio mode

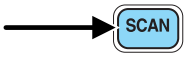
- Press ◀ to find the next listenable station down the frequency band. SEEK DOWN will display.
- Press ▶ to find the next listenable station up the frequency band. SEEK UP will display.

Seek function in CD mode

- Press ◀ to seek to the previous track of the current disc. If the beginning of the disc is reached, the CD player seeks to the beginning of the last track on the current disc and begins playing.
- Press ▶ to seek forward to the next track of the current disc. After the last track has been completed, the first track of the current disc will automatically replay.

Scan function

The scan function works in radio or CD mode.



Scan function in radio mode

Press the SCAN control to hear a brief sampling of all listenable stations on the frequency band. Press the SCAN control again to stop the scan mode.

Scan function in CD mode

Press the SCAN control to hear a short sampling of all selections on the CD. (The CD scans in a forward direction, wrapping back to the first track at the end of the CD.) To stop on a particular selection, press the control again.

Radio station memory preset

The radio is equipped with six station memory preset controls. These controls can be used to select up to six preset AM stations and twelve FM stations (six in FM1 and six in FM2).

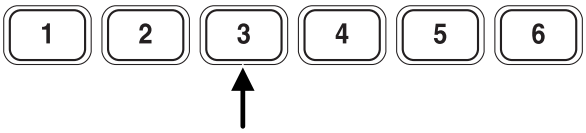
Setting memory preset stations

1. Select the frequency band with the AM/FM select control. Press the AM/FM control to toggle between AM, FM1, or FM2.

2. Press the SEEK control to access the next listenable station up or down the frequency band. Press the TUNE control to go up or down the listening band in individual increments.

3. Select a station. Refer to *Seek function* for more information on selecting a station.

4. Press and hold a memory preset control. The playing media will mute momentarily. When the sound returns, the station is held in memory on the control you selected. The display will read SAVED.



Autostore

Autostore allows you to set the strongest local radio stations without losing your original manually set preset stations. This feature is helpful on trips when you travel between cities with different radio stations.

Starting autostore

1. Press and momentarily hold the AM/FM control.

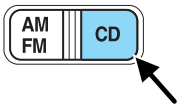
2. AUTOSET will flash in the display as the frequency band is scrolled through.

3. When the six strongest stations are filled, the station stored in memory preset control 1 will start playing.

If there are less than six strong stations available on the frequency band, the remaining memory preset controls will all store the last strong station available.

To deactivate autoset and return to your audio system's manually set memory stations, press the AM/FM control again.

CD select



CD mode may be entered by pressing the CD control and the LOAD control. Load the CD into the audio system. The first track of the disc will begin playing. After that, CD play will begin where it stopped last.

If an alternative CD is desired, press the corresponding preset control (1–6) of a loaded CD, or press the TUNE control to access the other loaded CDs.

NO CD will display if the CD control is activated when there is not a CD present in the audio system.

NO CD will illuminate in the display if the CD control and a present number (that is currently empty) are pressed. The system will play the next available disc.

If your vehicle is equipped with a CD changer, pressing the CD control again will allow you to toggle between accessing the multi disc system and the CD changer. The display will read CD or CDDJ.

Do not insert any promotional (odd shaped or sized) discs, or discs with removable labels into the CD player as jamming may occur.

Display description

Six circles are always lit in the digital display. These signify the six CD slots in the audio system. When a disc is loaded into a particular slot (1–6), the number inside that specific circle lights. If the circle is empty, there is no CD in that particular slot.

Load

The load feature allows you to load single CDs into the player internal to the radio.

This six disc CD player is equipped with a CD door. Compact discs should only be inserted into the player after the door has been opened by the player. Do not attempt to force the door open. Compact discs should only be loaded by pressing the LOAD control.

Press the LOAD control. (You can choose which slot will be loaded by pressing the desired preset number. If you do not choose a slot, the system will choose the next available one.) Wait until the CD door opens. Load the CD into the player. LOADING CD# is displayed. When the CD has been loaded, the door will close and the CD will begin to play. For example, to load a CD into slot 2, press the LOAD control and then press preset 2.

Auto load

This feature allows you to autoload up to 6 discs into the multi disc CD player internal to the radio.

Press and hold the LOAD control until AUTOLOAD # is displayed. The CD door will open. Load the desired disc, one at a time. The CD is loaded into position and the audio system will display CD#. Each time the CD door opens, INSERT CD# is displayed. The door will close and the player will move to the next slot after each disc has been loaded. The process is repeated until all 6 slots are full. The audio system plays the last CD loaded and the display is updated. If some slots are already full and autoload is activated, the system will fill all empty slots.

Eject

Press the EJ control to stop and eject a CD. You can choose which CD will be ejected by pressing the EJ control and the desired preset number (1–6). For example, to eject CD 2, press the EJ control and then press the preset 2 control. If you do not choose a specific CD, the player will eject the current CD.

If a CD is ejected and not removed from the door of the CD player, the player will automatically reload the CD. This feature may be used when the ignition is ON or OFF.

Auto eject

Press and momentarily hold the EJ control to engage auto eject. All CDs which are present in the player will be ejected one at a time. If a CD is ejected and not removed from the door of the CD player, the player will automatically reload the CD. This feature may be used when the ignition is ON or OFF.

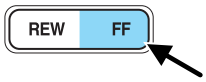
Rewind

The rewind control works in CD modes.

Press and hold the REW control until the desired selection is reached. If the beginning of the disc is reached, the CD will begin play at the first track. Release the control to disengage rewind mode.

When in rewind mode, your audio system will automatically lower the volume level of the playing media.

Fast forward

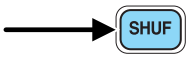


The fast forward control works in CD modes.

Press and hold the FF control until the desired selection is reached. If the end of the disc is reached, the CD will return to the first track on the first disc. Release the control to disengage fast forward mode.

When in fast forward mode, your audio system will automatically lower the volume level of the playing media.

Shuffle feature



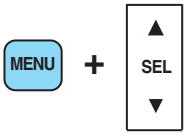
Press the SHUF control until the desired shuffle mode is displayed. The audio system will then engage the desired shuffle mode.

When engaged, the shuffle feature has two different modes: SHUFFLE DISC and SHUFFLE TRK.

SHUFFLE DISC randomly plays tracks from all the discs presently in the audio system.

SHUFFLE TRK plays all the tracks on the current disc in random order.

Compression feature (if equipped)



The compression feature operates in CD mode and brings soft and loud CD passages together for a more consistent listening level.

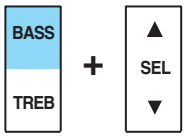
On Audiophile audios, press the MENU control until compression status is displayed. Press the SEL control to enable the compression feature when COMP OFF is displayed. Press the SEL control again to disable the feature when COMP ON is displayed.

On Premium audios, press the COMP control until COMP ON is displayed.

Bass adjust

The bass adjust control allows you to increase or decrease the audio system's bass output.

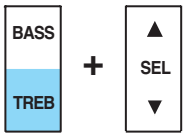
Press the BASS control. Use the SEL control to increase or decrease the amount of bass.



Treble adjust

The treble adjust control allows you to increase or decrease the audio system's treble output.

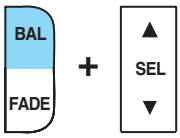
Press the TREB control. Use the SEL control to increase or decrease the amount of treble.



Speaker balance adjust

Speaker sound distribution can be adjusted between the right and left speakers.

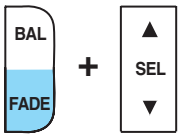
Press the BAL control. Use the SEL control to adjust the sound between the speakers.



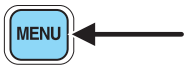
Speaker fade adjust

Speaker sound can be adjusted between the front and rear speakers.

Press the FADE control. Use the SEL control to adjust the sound between the front and rear speakers.



Menu mode



The MENU control allows you to access many different features within your audio system. There are three sets of menus available depending upon which mode or feature is activated.

While in FM mode, two menus are available. **If RDS is turned OFF**, you can access the following:

- SELECT HOURS — Refer to *Setting the clock*.
- SELECT MINUTES — Refer to *Setting the clock*.
- RDS OFF — Refer to *Radio data system feature*.

If RDS is turned ON, you can access the following:

- TRAFFIC ON/OFF-Refer to *Traffic announcements*.
- FIND type-Refer to *Program type*.
- SHOW (NAME, TYPE, NONE)- Refer to *Radio data system feature*.
- RDS ON— Refer to *Radio data system feature*.
- SELECT HOURS — Refer to *Setting the clock*.
- SELECT MINUTES —Refer to *Setting the clock*.

When in CD mode, you can access: SELECT HOURS, SELECT MINUTES or COMP ON/OFF.

SELECT HOURS, SELECT MINUTES— Allows you to adjust the hours and minutes. Refer to *Setting the clock*.

TRAFFIC ON/OFF— Traffic announcements can be programmed as local or distant. Refer to *Traffic announcements*.

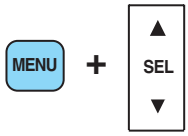
RDS ON/OFF— This feature allows your audio system to receive text information from RDS-equipped FM radio stations. Refer to *Radio Data System feature*.

FIND type — Allows you to select your desired FM program type and search for that selection.

SHOW — Allows you to select from NAME (displays the name of the radio station), TYPE (displays the RDS program type: rock, jazz, etc.), or NONE (deactivates the RDS display).

Radio data system (RDS) feature

This feature allows your audio system to receive text information from RDS-equipped FM radio stations.



To activate RDS:

- When in FM mode, press the MENU control until RDS OFF displays.
- Press the SEL control to engage this feature (RDS ON).

RDS features:

Once the RDS feature is on, press the MENU control to scroll through the following selections:

Traffic announcements

This feature allows you to hear traffic announcements while in CD mode. These announcements are broadcast by traffic capable RDS stations.

When in this mode, traffic announcements will interrupt radio and CD play.

- Press the MENU control until TRAFFIC is displayed.
- Press the SEL control to engage the feature. The display will read TRAFFIC ON.

This feature also allows you to control the volume of traffic announcements. With the display reading TRAFFIC ON, adjust the volume using the volume control to the desired level. The volume level will show at the bottom of the display. Interrupting traffic announcements will be at the selected volume level.

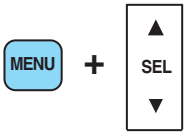
To disengage the feature, press the MENU control until TRAFFIC ON displays. Press the SEL control. The display will read TRAFFIC OFF.

Traffic announcements not available in most U.S. markets.

Program type

This feature allows you to search for RDS stations selectively by their program type.

Press the MENU control until FIND program type is displayed.

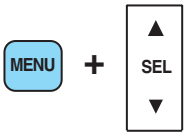


Use the SEL control to select the program type. With the feature on, use the SEEK or SCAN control to find the desired program type from the following selections:

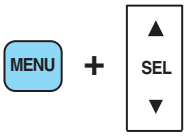
- Classic
- Country
- Info
- Jazz
- Oldies
- R & B
- Religious
- Rock
- Soft
- Top 40

Show

This feature allows you to select the type of RDS broadcast information the radio will regularly show in the display.



With RDS activated, press the MENU control until SHOW is displayed.

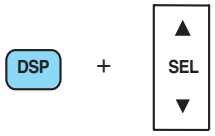


Use the SEL control to select TYPE (displays the RDS program type: rock, jazz, etc), NAME (displays the name of the radio station) or NONE (deactivates the RDS display).

Digital signal processing (if equipped)

The digital signal processing (DSP) feature allows you to change the signal mode to suit your listening tastes.

Press the DSP control to access the DSP menu. Press the SEL control to enter one of the following modes:



- DSP OFF
- SIGNAL MODE
- OCCUPANCY MODE

Use the SEL control to select the desired signal mode (the selected mode will appear in the display). The following signal modes can be selected:

- DSP OFF—disengages the feature
- NEWS—"voice-only" type of sound with a limited audio band
- JAZZ CLUB—jazz club with clearly reflected sounds
- HALL—rectangular concert hall capacity of about 2 000
- CHURCH—church with a high vault
- STADIUM—outdoor stadium with a capacity of about 30 000

Press the DSP control again to access the occupancy modes. Use the SEL control to optimize the sound based upon the occupants in the vehicle. The following occupancy modes can be selected:

- ALL SEATS
- DRIVER SEAT
- REAR SEATS

Phone mode

This feature allows you to control the factory-installed cellular phone (if equipped) through the radio controls.

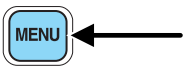
- Press the phone/mute control to enter phone mode. The playing media will mute.
- Use SEEK, TUNE or radio presets 1 through 6 to select a phone number previously programmed in the phone.
- Press the phone/mute control again to send and end calls.

This control will mute the playing media even if your vehicle is not equipped with a factory-installed cellular phone.

Press the control again to return to the playing media.

Setting the clock

Press the MENU control until SELECT HOUR or SELECT MINUTE is displayed.



Use the SEL control to manually set the time.

- Press ▲ to increase hours/minutes.
- Press ▼ to decrease hours/minutes.

Cleaning compact discs

Inspect all discs for contamination before playing. If necessary, clean discs only with an approved CD cleaner and wipe from the center out to the edge. Do not use circular motion.

CD and CD changer care

- Handle discs by their edges only. Never touch the playing surface.
- Do not expose discs to direct sunlight or heat sources for extended periods of time.
- Do not insert more than one disc into each slot of the CD changer magazine.

Do not insert any promotional (odd shaped or sized) discs, or discs with removable labels into the CD player as jamming may occur.

Cleaning cassette player (if equipped)

Clean the tape player head with a cassette cleaning cartridge after 10 to 12 hours of play in order to maintain the best sound and operation.

Cassette and cassette player care

- Use only cassettes that are 90 minutes long or less.
- Do not expose tapes to direct sunlight, high humidity, extreme heat or extreme cold. Allow tapes that may have been exposed to extreme temperatures to reach a moderate temperature before playing.
- Tighten very loose tapes by inserting a finger or pencil into the hole and turning the hub.
- Remove loose labels before inserting tapes.
- Do not leave tapes in the cassette player for a long time when not being played.

Radio frequency information

The Federal Communications Commission (FCC) and the Canadian Radio and Telecommunications Commission (CRTC) establish the frequencies AM and FM stations may use for their broadcasts. Allowable frequencies are:

- AM 530, 540–1600, 1610 kHz[a]
- FM 87.9[b], 88.1–107.7, 107.9 MHz

Not all frequencies are used in a given area.

[a]Some radios may tune up to 1710 kHz.

[b]Some radios may tune down to 87.7 MHz.

Radio reception factors

Three factors can affect radio reception:

- **Distance/strength.**The further an FM signal travels, the weaker it is. The listenable range of the average FM station is approximately 40 km (24 miles). This range can be affected by “signal modulation.” Signal modulation is a process radio stations use to increase their strength/volume relative to other stations.

- **Terrain.**Hills, mountains and tall buildings between your vehicle's antenna and the radio station signal can cause FM reception problems. Static can be caused on AM stations by power lines, electric fences, traffic lights and thunderstorms. Moving away from an interfering structure (out of its "shadow") returns your reception to normal.
- **Station overload.**Weak signals are sometimes captured by stronger signals when you pass a broadcast tower. A stronger signal may temporarily overtake a weaker signal and play while the weak station frequency is displayed.

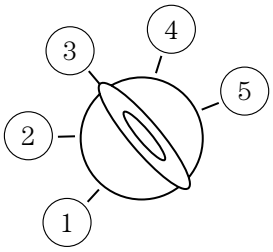
The audio system automatically switches to single channel reception if it will improve the reception of a station normally received in stereo.

Audio system warranties and service

Refer to the *Warranty Guide* for audio system warranty information.

If service is necessary, see your dealer or a qualified technician.

POSITIONS OF THE IGNITION



1. ACCESSORY, allows the electrical accessories such as the radio to operate while the engine is not running.

2. LOCK, locks the steering wheel, automatic transmission gearshift lever and allows key removal.

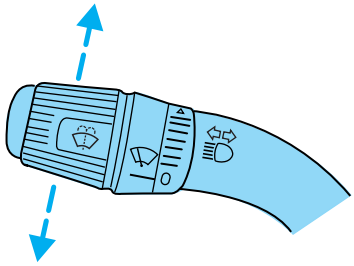
3. OFF, shuts off the engine and all accessories without locking the steering wheel.

4. ON, all electrical circuits operational. Warning lights illuminated. Key position when driving.

5. START, cranks the engine. Release the key as soon as the engine starts.

TURN SIGNAL CONTROL ⇦⇨

- Push down to activate the left turn signal.
- Push up to activate the right turn signal.



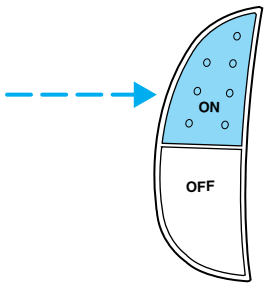
SPEED CONTROL (IF EQUIPPED)

To turn speed control on

- Press ON.

Vehicle speed cannot be controlled until the vehicle is traveling at or above 48 km/h (30 mph).

Do not shift the gearshift lever into N (Neutral) with the speed control on.

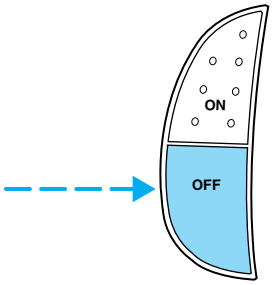


Do not use the speed control in heavy traffic or on roads that are winding, slippery, or unpaved.

To turn speed control off

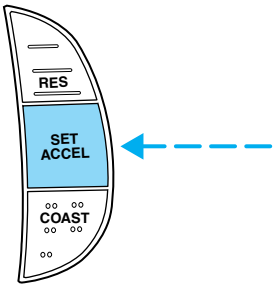
- Press OFF or
- Turn off the vehicle ignition.

Once speed control is switched off, the previously programmed set speed will be erased.



To set a speed

- Press SET ACCEL. For speed control to operate, the speed control must be ON and the vehicle speed must be greater than 48 km/h (30 mph).



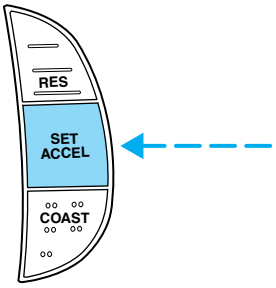
If you drive up or down a steep hill, your vehicle speed may vary momentarily slower or faster than the set speed. This is normal.

Speed control cannot reduce the vehicle speed if it increases above the set speed on a downhill. If your vehicle speed is faster than the set speed while driving on a downhill, you may want to shift to the next lower gear or apply the brakes to reduce your vehicle speed.

If your vehicle slows down more than 16 km/h (10 mph) below your set speed on an uphill, your speed control will disengage. This is normal. Pressing RES will re-engage it.

Do not use the speed control in heavy traffic or on roads that are winding, slippery, or unpaved.

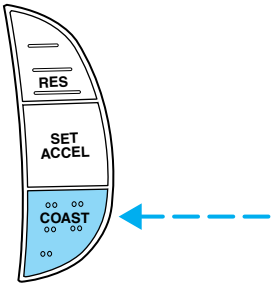
To set a higher set speed



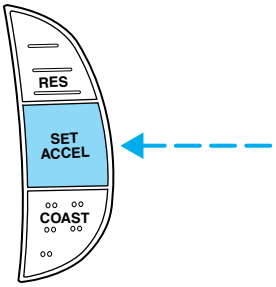
- Press and hold SET ACCEL. Release the control when the desired vehicle speed is reached or
- Press and release SET ACCEL to operate the Tap-Up function. Each press will increase the set speed by 1.6 km/h (1 mph) or
- Accelerate with your accelerator pedal. When the desired vehicle speed is reached, press and release SET ACCEL.

You can accelerate with the accelerator pedal at any time during speed control usage. Releasing the accelerator pedal will return your vehicle to the previously programmed set speed.

To set a lower set speed



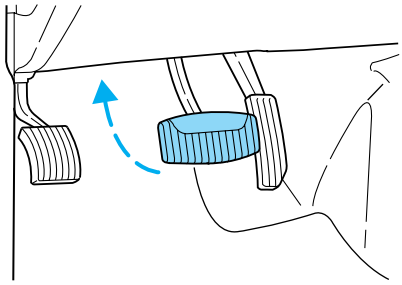
- Press and hold COAST. Release the control when the desired speed is reached or
- Press and release COAST to operate the Tap-Down function. Each press will decrease the set speed by 1.6 km/h (1 mph) or



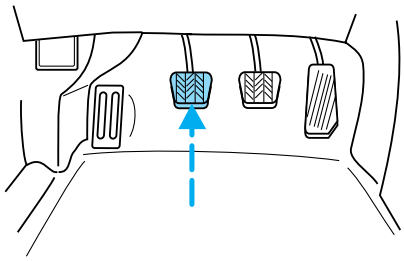
- Depress the brake pedal. When the desired vehicle speed is reached, press SET ACCEL.

To disengage speed control

- Depress the brake pedal or

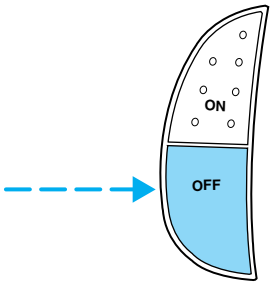


- Depress the clutch pedal (if equipped).



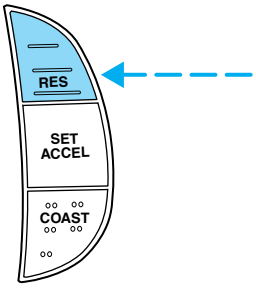
Disengaging the speed control will not erase the previously programmed set speed.

Pressing OFF will erase the previously programmed set speed.



To return to a previously set speed

- Press RES. For RES to operate, the vehicle speed must be faster than 48 km/h (30 mph).



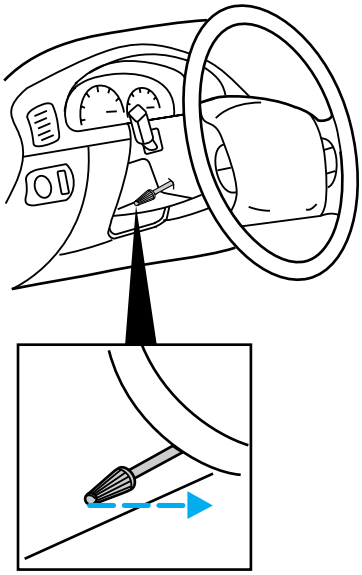
Indicator light

CRUISE

This light comes on when either the SET ACCEL or RES controls are pressed. The vehicle speed must be at or above 48 km/h (30 mph). It turns off when the speed control OFF control is pressed, the brake or clutch is applied, or the ignition is turned to the OFF position.

TILT STEERING WHEEL (IF EQUIPPED)

Pull the tilt steering control toward you to move the steering wheel up or down. Hold the control while adjusting the wheel to the desired position, then release the control to lock the steering wheel in position.



Never adjust the steering wheel when the vehicle is moving.

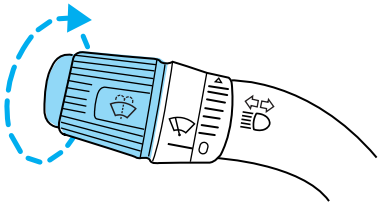
HAZARD FLASHER

For information on the hazard flasher control, refer to *Hazard flasher* in the *Roadside emergencies* chapter.

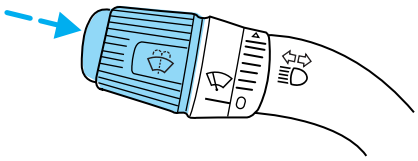
WINDSHIELD WIPER/WASHER CONTROLS

Rotate the windshield wiper control to the desired interval, low or high speed position.

The bars of varying length are for intermittent wipers. When in this position rotate the control upward for fast intervals and downward for slow intervals.



Push the control on the end of the stalk to activate washer. Push and hold for a longer wash cycle. The washer will automatically shut off after ten seconds of continuous use.



OVERDRIVE CONTROL (IF EQUIPPED)

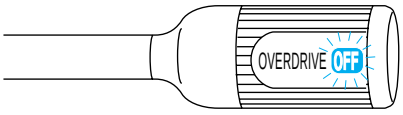
Activating overdrive

(Overdrive) is the normal drive position for the best fuel economy.

The overdrive function allows automatic upshifts and downshifts through all available gears.

Deactivating overdrive

Press the Transmission Control Switch (TCS) located on the end of the gearshift lever. The Transmission Control Indicator Light (TCIL) (the word OFF) will illuminate on the end of the gearshift lever.



The transmission will operate in all gears except overdrive. To return to normal overdrive mode, press the Transmission Control Switch again. The TCIL (the word OFF) will no longer be illuminated.

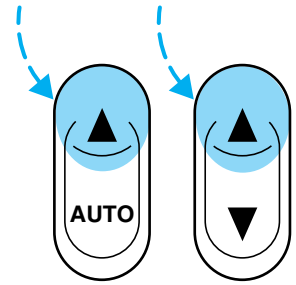
When you shut off and re-start your vehicle, the transmission will automatically return to normal (Overdrive) mode.

For additional information about the gearshift lever and the transmission control switch operation refer to the *Automatic Transmission Operation* section of the *Driving* chapter.

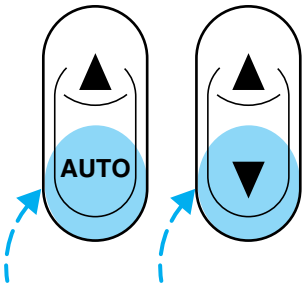
POWER WINDOWS (IF EQUIPPED)

Press and hold the rocker switches to open and close windows.

- Press the top portion of the rocker switch to close.

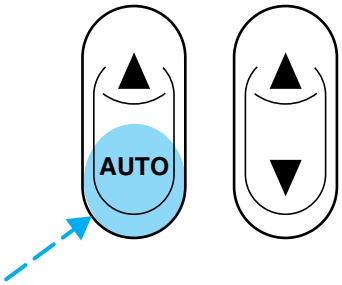


- Press the bottom portion of the rocker switch to open.

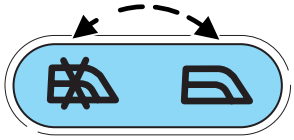


One touch down

- Press AUTO completely down and release quickly. The driver's window will open fully. Depress again to stop window operation.



Window lock



The window lock feature allows only the driver to operate the power windows.

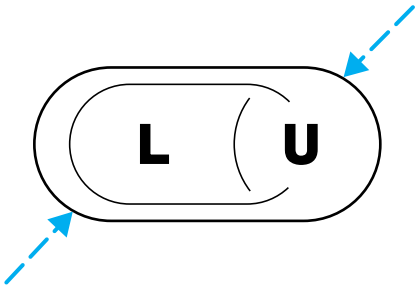
To lock out all the window controls except for the driver's press the left side of the control. Press the right side to restore the window controls.

Accessory delay (if equipped)

With accessory delay, the window switches may be used for up to ten minutes after the ignition switch is turned to the OFF position or until any door is opened.

POWER DOOR LOCKS (IF EQUIPPED)

Press U to unlock all doors and L to lock all doors.

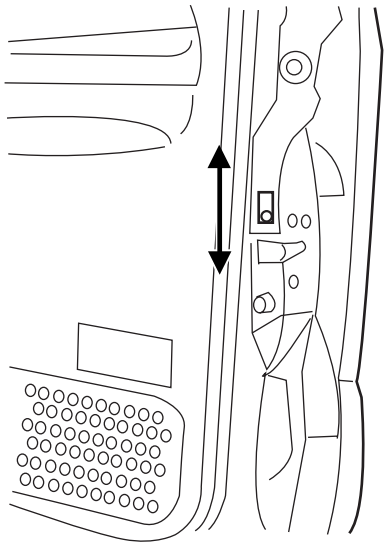


CHILDPROOF DOOR LOCKS

When these locks are set, the rear doors cannot be opened from the inside. The rear doors can be opened from the outside when the doors are unlocked.

The childproof locks are located on rear edge of each rear door and must be set separately for each door. Setting the lock for one door will not automatically set the lock for both doors.

Move lock control up to engage the childproof lock. Move control down to disengage childproof locks.

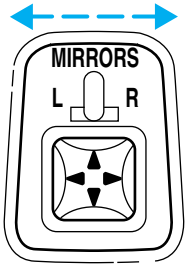


POWER SIDE VIEW MIRRORS (IF EQUIPPED)

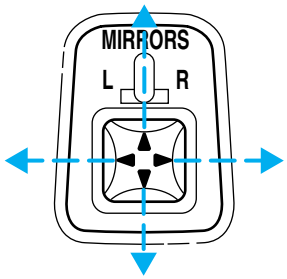
The ignition can be in any position to adjust the power side view mirrors.

To adjust your mirrors:

1. Select L to adjust the left mirror or R to adjust the right mirror.

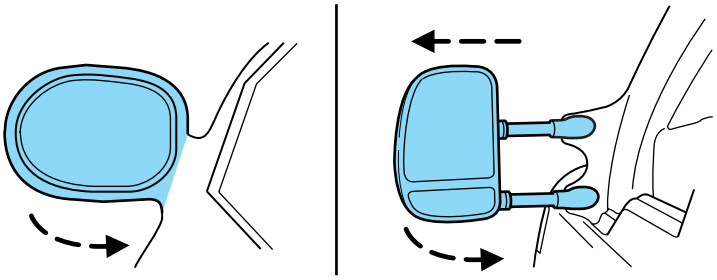


2. Move the control in the direction you wish to tilt the mirror.



3. Return to the center position to lock mirrors in place.
4. Adjust spotter mirrors (if equipped) manually.

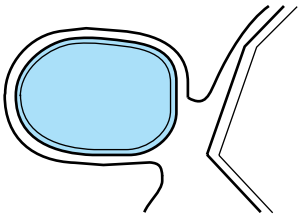
Fold-away mirrors



Fold the side mirrors in carefully when driving through a narrow space, like an automatic car wash.

The telescoping feature (if equipped) allows the mirror to extend approximately 76 mm (3 inches).

Heated outside mirrors (if equipped)

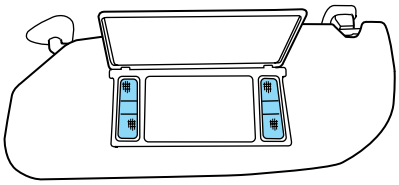


Both mirrors are heated automatically to remove ice, mist and fog when the rear window defrost is activated.

Do not remove ice from the mirrors with a scraper or attempt to readjust the mirror glass if it is frozen in place. These actions could cause damage to the glass and mirrors.

ILLUMINATED VISOR MIRROR (IF EQUIPPED)

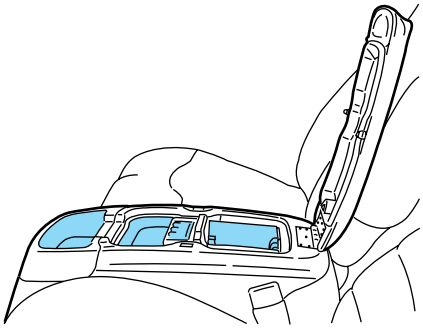
To turn on the visor mirror lamps, lift the mirror cover open.



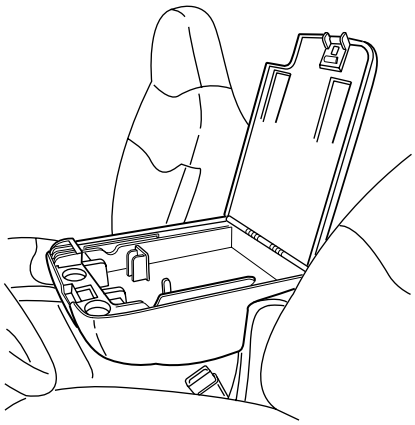
CENTER CONSOLE (IF EQUIPPED)

Your vehicle may be equipped with a variety of console features. These include:

- Utility compartment with cassette/CD holder
- Coin holder
- Pen holder
- Writing surface



- Utility compartment
- Coin holder
- Pen holder
- Writing surface
- Space for lap-top computer



REMOTE ENTRY SYSTEM (IF EQUIPPED)

This device complies with part 15 of the FCC rules and with RS-210 of Industry Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The remote entry system allows you to lock or unlock all vehicle doors without a key.

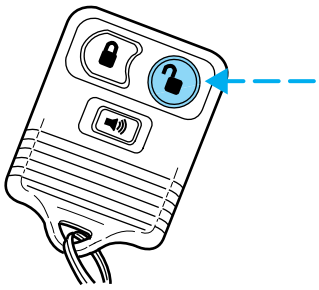
The remote entry features only operate with the ignition in the LOCK position.

If there is any potential remote keyless entry problem with your vehicle, ensure **ALL key fobs** (remote entry transmitters) are brought to the dealership, to aid in troubleshooting.

Unlocking the doors

Press this control to unlock the driver's door. The interior lamps will illuminate.

Press the control a second time within five seconds to unlock all doors.

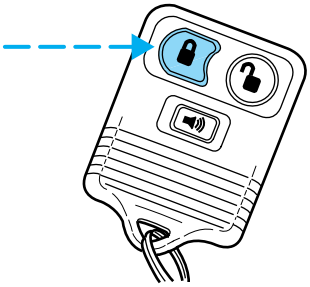


Locking the doors

Press this control to lock all doors.

To confirm all doors are closed and locked, press the control a second time within five seconds. The doors will lock again, the horn will chirp and the lamps will flash.

If any of the doors are ajar, the horn will make two quick chirps, reminding you to properly close all doors.

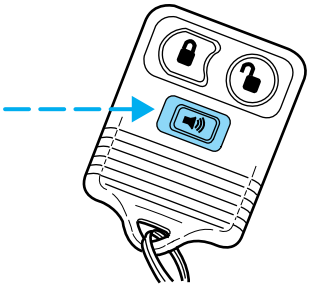


Sounding a panic alarm

Press this control to activate the alarm.

To deactivate the alarm, press the control again or turn the ignition to ACC or ON.

Panic alarm will only operate with the ignition in the OFF position.



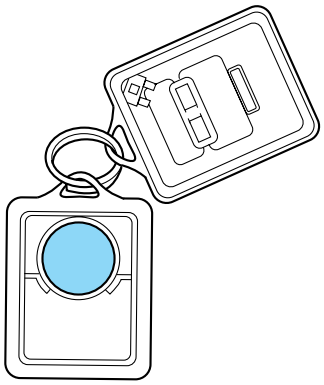
Replacing the battery

The transmitter is powered by one coin type three-volt lithium battery CR2032 or equivalent. Typical operating range will allow you to be up to 10 meters (33 feet) away from your vehicle. A decrease in operating range can be caused by:

- weather conditions
- nearby radio towers
- structures around the vehicle
- other vehicles parked next to the vehicle

To replace the battery:

1. Twist a thin coin between the two halves of the transmitter near the key ring. DO NOT TAKE THE FRONT PART OF THE TRANSMITTER APART.
2. Place the positive (+) side of new battery in the same orientation. Refer to the diagram inside the transmitter unit.
3. Snap the two halves back together.



Illuminated entry

The interior lamps illuminate when the remote entry system is used to unlock the door(s) or sound the personal alarm.

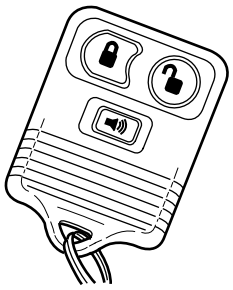
The system automatically turns off after 25 seconds or when the ignition is turned to the RUN or ACC position. The dome lamp control (if equipped) must **not** be set to the OFF position for the illuminated entry system to operate.

The inside lights will not turn off if:

- they have been turned on with the dimmer control or
- any door is open

The battery saver will shut off the interior lamps 45 minutes after the ignition has been turned to the OFF position.

Replacing lost transmitters



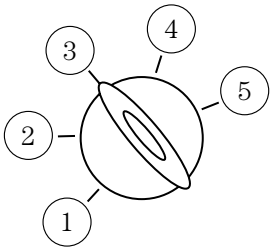
If a remote transmitter has been lost and you would like to remove it from the vehicle's memory, or you would like to purchase additional remote transmitters and have them programmed to your vehicle:

- Take **all** your vehicle's transmitters to your dealer for programming, or
- Perform the programming procedure yourself

Programming remote transmitters

It is necessary to have **all** (maximum of four — original and/or new) of your remote transmitters available prior to beginning this procedure.

To program the transmitters yourself:

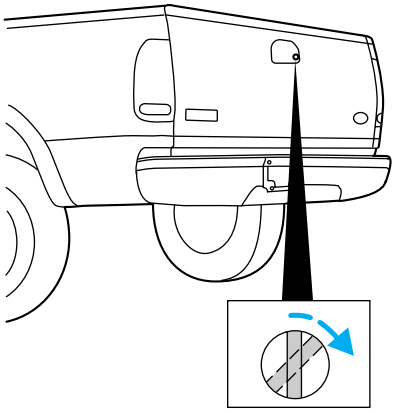


- Place the key in the ignition and turn from 2 (LOCK) to 3 (OFF) and cycle between 3 (OFF) and 4(ON) eight times in rapid succession (within 10 seconds) with the eighth turn ending in the 4 (ON) position. The doors will lock/unlock to confirm that programming mode has been entered.
- Within 20 seconds, program a remote transmitter by pressing any button on a transmitter. The doors will lock/unlock to confirm that the remote transmitter has been programmed. (If more than 20 seconds pass before pressing a remote transmitter button, the programming mode will exit and the procedure will have to be repeated.)
- Repeat the previous step to program additional remote transmitters. The doors will lock/unlock to confirm that each remote transmitter has been programmed.
- When you have completed programming the remote transmitters, turn the ignition to 3 (OFF) or wait 20 seconds. Again the doors will lock/unlock to confirm programming has been completed.

TAILGATE LOCK (IF EQUIPPED)

Your vehicle may be equipped with a tailgate lock designed to prevent theft of the tailgate.

- Insert ignition key and turn to the right to engage lock.
- Turn ignition key to the left to unlock.

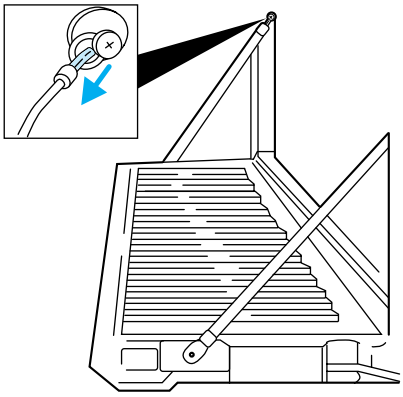


TAILGATE REMOVAL

Your tailgate is removable to allow more room for loading.

1. Lower the tailgate.
2. Use a screwdriver to pry the spring clip (on each connector) past the head of the support screw. Disconnect cable.
3. Disconnect the other cable.
4. Lift tailgate to a 45 degree angle.
5. Lift right side off of its hinge.
6. Lift left side off of its hinge.

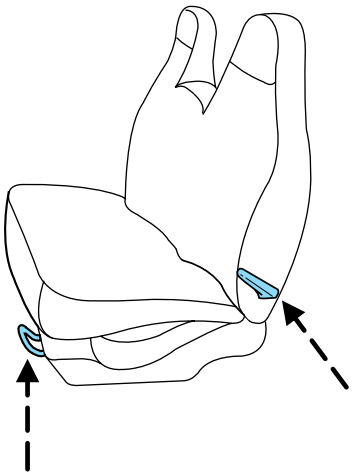
To install, follow the removal procedures in reverse order.



SEATING

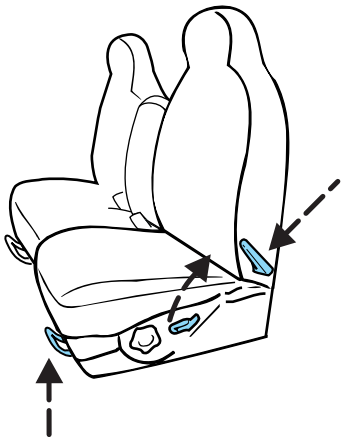
Full bench seat (if equipped)

- Lift the track release bar to move the seat forward or backward. Ensure that the seat is relatched into place.
- Pull up on the release lever located at the bottom of the seatback to quickly fold the seatback forward.



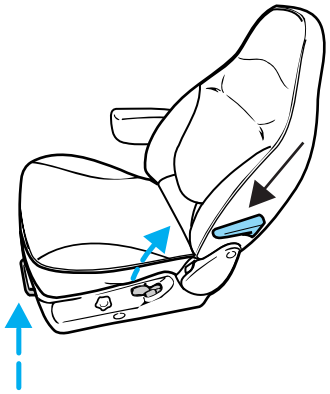
40/20/40 split bench seat (if equipped)

- Lift the track release bar to move the seat forward or backward. Ensure the seat is relatched into place.
- Pull the seatback handle up to recline the seat.
- Push down the release lever located at the bottom of the seatback to quickly fold the seatback forward.



Captain's chair (if equipped)

- Lift the track release bar to move the seat forward or rearward. Make sure that the seat is relatched into place.
- Pull the release lever handle located on the side of the seat up to move the seat back forward or backward.
- Push down the release lever (if equipped) located at the bottom of the seatback to quickly fold the seatback forward.



Adjusting the front power seat (if equipped)

Never adjust the driver's seat or seatback when the vehicle is moving.

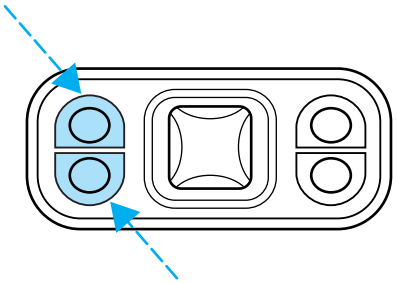
Do not pile cargo higher than the seatbacks to avoid injuring people in a collision or sudden stop.

Always drive and ride with your seatback upright and the lap belt snug and low across the hips.

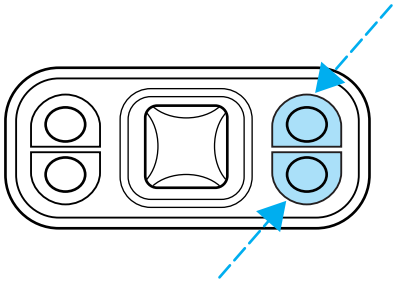
Reclining the seatback can reduce the effectiveness of the seat's safety belt in the event of a collision.

The control is located on the outboard side of the seat cushion.

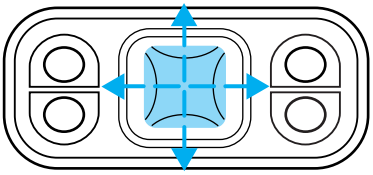
Press to raise or lower the front portion of the seat cushion.



Press to raise or lower the rear portion of the seat cushion.



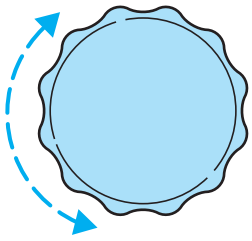
Press the control to move the seat forward, backward, up or down.



Using the manual lumbar support

Turn the lumbar support control toward the front of vehicle to move the lumbar support forward for more direct support.

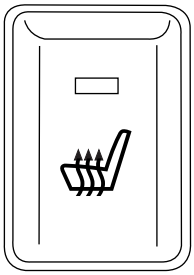
Turn the lumbar support control toward the rear of vehicle to move the lumbar support back for less direct support.



Heated seats (if equipped)

To operate the heated seats:

- Push control to activate.
- Push again to deactivate.

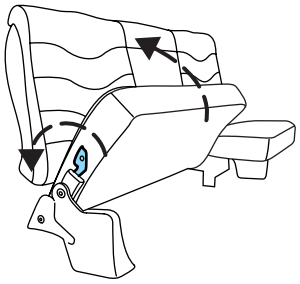


The indicator light on the control will illuminate when activated.

FOLDING UP THE REAR SEATS (IF EQUIPPED — SUPERCAB ONLY)

The rear seatback has a split 60/40 seat. Each seat cushion can be flipped up into the seatback position.

1. Pull control to release seat cushion.
2. Rotate seat cushion up until it locks into vertical storage position.



RETURNING THE SEAT TO SEATING POSITION

Always be sure that the seat is in a latched position, whether the seat is occupied or empty. If not latched, the seat may cause injury during a sudden stop.

1. Pull control on the side of the seat to release seat cushion from storage position.
2. Push seat cushion down until it locks into horizontal position.

SAFETY RESTRAINTS

Safety restraints precautions

Always drive and ride with your seatback upright and the lap belt snug and low across the hips.

To reduce the risk of injury, make sure children sit where they can be properly restrained.

Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.

All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag SRS is provided.

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in your vehicle is in a seat and using a safety belt properly.

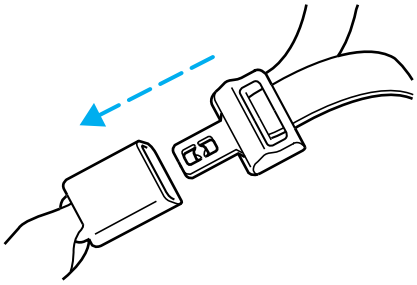
In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a safety belt.

Each seating position in your vehicle has a specific safety belt assembly which is made up of one buckle and one tongue that are designed to be used as a pair. 1) Use the shoulder belt on the outside shoulder only. Never wear the shoulder belt under the arm. 2) Never swing the safety belt around your neck over the inside shoulder. 3) Never use a single belt for more than one person.

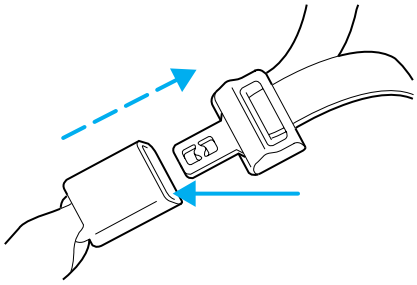
Always transport children 12 years old and under in the back seat and always properly use appropriate child restraints.

Combination lap and shoulder belts

1. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.



2. To unfasten, push the release button and remove the tongue from the buckle.



The front and rear outboard safety restraints in the vehicle are combination lap and shoulder belts. The front passenger and rear seat outboard safety belts have two types of locking modes described below:

Vehicle sensitive mode

The vehicle sensitive mode is the normal retractor mode, allowing free shoulder belt length adjustment to your movements and locking in response to vehicle movement. For example, if the driver brakes suddenly or turns a corner sharply, or the vehicle receives an impact of approximately 8 km/h (5 mph) or more, the combination safety belts will lock to help reduce forward movement of the driver and passengers.

On SuperCab and CrewCab models, the front seat belt system can also be made to lock manually by quickly pulling on the shoulder belt.

Rear seat belts (if equipped) cannot be made to lock up by pulling quickly on the belt.

Automatic locking mode

In this mode, the shoulder belt is automatically pre-locked. The belt will still retract to remove any slack in the shoulder belt.

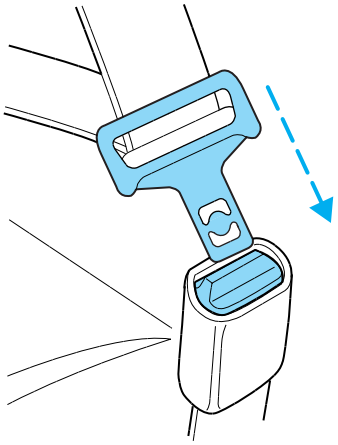
The automatic locking mode is not available on the driver safety belt.

When to use the automatic locking mode

- **Any time** a child safety seat is installed in a passenger front or outboard rear seating position (if equipped). Children 12 years old and under should be properly restrained in the rear seat whenever possible. Refer to *Safety Restraints for Children* or *Safety Seats for Children* later in this chapter.

How to use the automatic locking mode

- Buckle the combination lap and shoulder belt.



- Grasp the shoulder portion and pull downward until the entire belt is extracted.

- Allow the belt to retract. As the belt retracts, you will hear a clicking sound. This indicates the safety belt is now in the automatic locking mode.

How to disengage the automatic locking mode

Ford recommends that all safety belt assemblies and attaching hardware should be inspected by a qualified technician after any collision. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

Disconnect the combination lap/shoulder belt and allow it to retract completely to disengage the automatic locking mode and activate the vehicle sensitive (emergency) locking mode.

After any vehicle collision, the front passenger outboard seat belt system must be checked by a qualified technician to verify that the “automatic locking retractor” feature for child seats is still functioning properly. In addition, all seat belts should be checked for proper function.

BELT AND RETRACTOR ASSEMBLY MUST BE REPLACED if the seat belt assembly “automatic locking retractor” feature or any other seat belt function is not operating properly when checked according to the procedures in Workshop Manual.

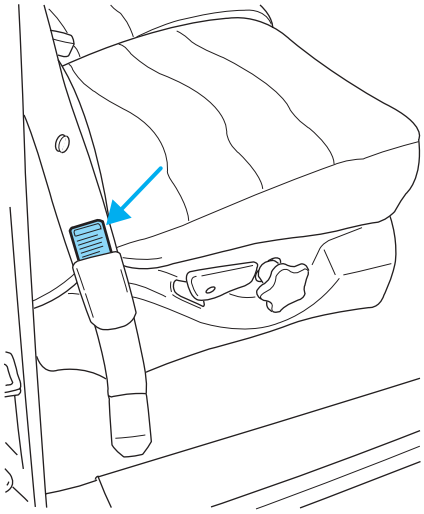
Failure to replace the Belt and Retractor assembly could increase the risk of injury in collisions.

Energy Management Feature

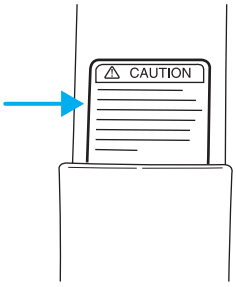
- This vehicle has a seat belt system with an energy management feature at the front outboard seating position to help further reduce the risk of injury in the event of a head-on collision.
- The front outboard seat belt system has a retractor assembly that is designed to pay out webbing in a controlled manner. This feature is designed to help reduce the belt force acting on the occupant’s chest.

Safety belt replacement label

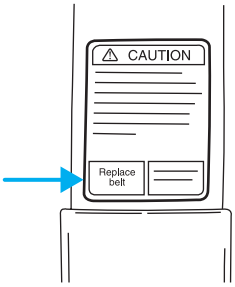
The short plastic boot on the front safety belt at the passenger outboard anchor location covers a “Replace Belt” label on the safety belt.



In the event of a collision, the colored label (REPLACE BELT) may become visible. If this occurs, *the safety belt must be replaced.*



Whenever the yellow portion of the label is visible, the safety belt must be replaced.



Failure to follow these instructions will affect the performance of the safety belts and increase the risk of personal injury.

Safety belt pretensioner

Your vehicle may be equipped with safety belt pretensioners at the driver and front outboard passenger seating positions.

The Seat Integrated Restraints (SIR) seat is equipped with a buckle pretensioner. Do NOT place objects between the seats, this could interfere with the functioning of the pretensioner. For the SuperCab and CrewCab base bench seats and all Regular Cab seating positions, the seatbelts are equipped with a retractor pretensioner.

The safety belt pretensioners are designed to activate only during certain frontal or near-frontal collisions with sufficient longitudinal deceleration. A safety belt pretensioner is a device which tightens the webbing of the lap and shoulder belts in such a way that they fit more snugly against the body.

The driver and front outboard passenger safety belt system (including retractors, buckles and height adjusters) must be replaced if the vehicle is involved in a collision that results in the activation of the safety belt pretensioners. Refer to the *Safety belt maintenance* section in this chapter.

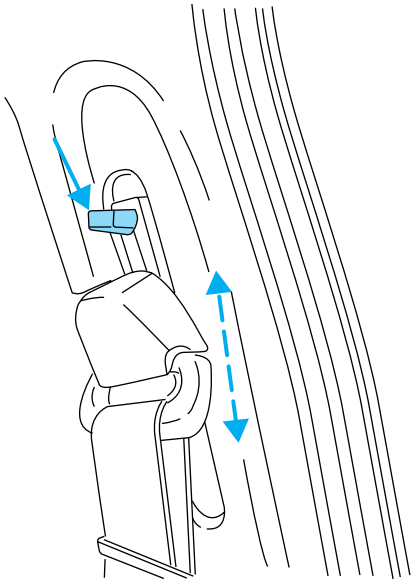
Failure to replace the safety belt assembly under the above conditions could result in severe personal injuries in the event of a collision.

Front safety belt height adjustment

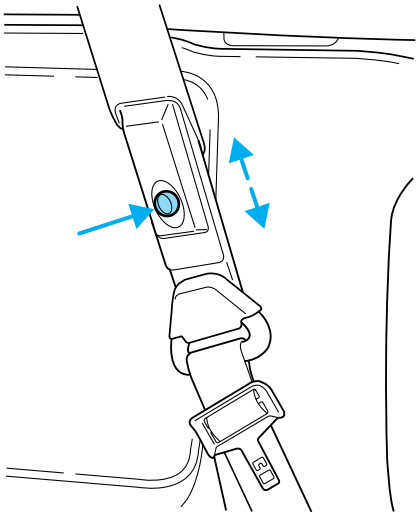
If your vehicle has seat integrated restraints you will not have safety belt height adjustments.

Your vehicle may have safety belt height adjustments for the driver and front passenger. Adjust the height of the shoulder belt so the belt rests across the middle of your shoulder.

- Regular Cab and 4–door CrewCab



- 4–door Super Cab (if equipped)



To lower the shoulder belt height, push the button and slide the height adjuster down. To raise the height of the shoulder belt, slide the height adjuster up. Pull down on the height adjuster to make sure it is locked in place.

Position the shoulder belt height adjusters so that the belt rests across the middle of your shoulder. Failure to adjust the safety belt properly could reduce the effectiveness of the seat belt and increase the risk of injury in a collision.

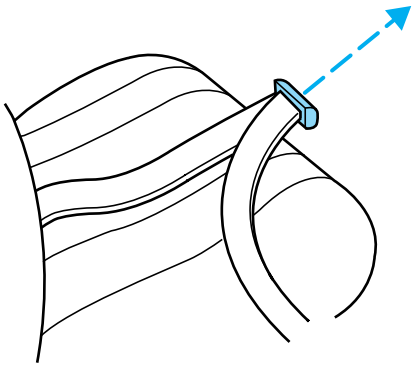
Lap belts

Adjusting the center lap belt

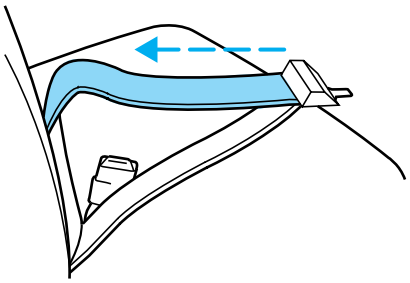
The lap belt does not adjust automatically.

The lap belt should fit snugly and as low as possible around the hips, not across the waist.

Insert the tongue into the correct buckle (the buckle closest to the direction the tongue is coming from). To lengthen the belt, turn the tongue at a right angle to the belt and pull across your lap until it reaches the buckle. To tighten the belt, pull the loose end of the belt through the tongue until it fits snugly across the hips.



Shorten and fasten the belt when not in use.



Safety belt extension assembly

If the safety belt is too short when fully extended, there is a 20 cm (8 inch) safety belt extension assembly that can be added (part number 611C22). This assembly can be obtained from your dealer at no cost.

Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on the label. Also, use the safety belt extension only if the safety belt is too short for you when fully extended. Do not use extensions to change the fit of the shoulder belt across the torso.

Safety belt warning light and indicator chime

The seat belt warning light illuminates in the instrument cluster and a chime sounds to remind the occupants to fasten their safety belts.

Conditions of operation

If...	Then...
The driver's safety belt is not buckled before the ignition switch is turned to the ON position...	The safety belt warning light illuminates 1-2 minutes and the warning chime sounds 4-8 seconds.
The driver's safety belt is buckled while the indicator light is illuminated and the warning chime is sounding...	The safety belt warning light and warning chime turn off.
The driver's safety belt is buckled before the ignition switch is turned to the ON position...	The safety belt warning light and indicator chime remain off.

Belt minder

The Belt Minder feature is a supplemental warning to the safety belt warning function. This feature provides additional reminders to the driver that the driver's safety belt is unbuckled by intermittently sounding a chime and illuminating the safety belt warning lamp in the instrument cluster.

If...	Then...
The driver's safety belt is not buckled before the vehicle has reached at least 5 km/h (3 mph) and 1-2 minutes have elapsed since the ignition switch has been turned to ON...	The Belt Minder feature is activated - the safety belt warning light illuminates and the warning chime sounds for 6 seconds every 30 seconds, repeating for approximately 5 minutes or until safety belt is buckled.
The driver's safety belt is buckled while the safety belt indicator light is illuminated and the safety belt warning chime is sounding...	The Belt Minder feature will not activate.
The driver's safety belt is buckled before the ignition switch is turned to the ON position...	The Belt Minder feature will not activate.

The purpose of the Belt Minder is to remind occasional wearers to wear safety belts all of the time.

The following are reasons most often given for not wearing safety belts: (All statistics based on U.S. data)

Reasons given...	Consider...
"Crashes are rare events"	**36 700 crashes occur every day.** The more we drive, the more we are exposed to "rare" events, even for good drivers. *1 in 4 of us will be seriously injured in a crash during our lifetime.*
"I'm not going far"	**3 of 4** fatal crashes occur within **25** miles of home.
"Belts are uncomfortable"	We design our safety belts to enhance comfort. If you are uncomfortable - try different positions for the safety belt upper anchorage and seatback which should be as upright as possible; this can improve comfort.
"I was in a hurry"	**Prime time for an accident.** Belt Minder reminds us to take a few seconds to buckle up.
"Seat belts don't work"	**Safety belts,** when used properly, **reduce risk of death** to front seat occupants by **45% in cars,** and by **60% in light trucks.**
"Traffic is light"	**Nearly 1 of 2 deaths occur in single-vehicle crashes,** many when no other vehicles are around.
"Belts wrinkle my clothes"	Possibly, but a serious crash can do much more than wrinkle your clothes, particularly if you are unbelted.
"The people I'm with don't wear belts"	Set the example, teen deaths occur 4 times more often in vehicles with TWO or MORE people. Children and younger brothers/sisters imitate behavior they see.
"I have an air bag"	Air bags offer greater protection when used with safety belts. Frontal airbags are not designed to inflate in rear and side crashes or rollovers.
"I'd rather be thrown clear"	Not a good idea. **People** who are **ejected are 40 times more likely to DIE.** Safety belts help prevent ejection, WE CAN'T "PICK OUR CRASH".

Do not sit on top of a buckled safety belt to avoid the Belt Minder chime. Sitting on the safety belt will increase the risk of injury in an accident. To disable (one-time) or deactivate the Belt Minder feature please follow the directions stated below.

One time disable

Any time the safety belt is buckled and then unbuckled during an ignition ON cycle, Belt Minder will be disabled for that ignition cycle only.

Deactivating/activating the belt minder feature

Read steps 1 - 9 thoroughly before proceeding with the deactivation/activation programming procedure.

The Belt Minder feature can be deactivated/activated by performing the following procedure:

Before following the procedure, make sure that:

- The parking brake is set.
- The gearshift is in P (Park) (automatic transmission) or the neutral position (manual transmission).
- The ignition switch is in the OFF position.
- All vehicle doors are closed.
- The driver's safety belt is unbuckled.
- The parklamps/headlamps are in OFF position (If vehicle is equipped with Autolamps, this will not affect the procedure).

To reduce the risk of injury, do not deactivate/activate the Belt Minder feature while driving the vehicle.

1. Turn the ignition switch to the RUN (or ON) position. (DO NOT START THE ENGINE.)

2. Wait until the safety belt warning light turns off. (Approximately 1–2 minutes.)

- Steps 3–5 must be completed within 60 seconds or the procedure will have to be repeated.

3. Buckle then unbuckle the safety belt three times, ending with the safety belt unbuckled. This can be done before or during Belt Minder warning activation.

4. Turn on the parklamps/headlamps, turn off the parklamps/headlamps.

5. Buckle then unbuckle the safety belt three times, ending with the safety belt unbuckled.

- After step 5 the safety belt warning light will be turned on for three seconds.

6. Within seven seconds of the safety belt warning light turning off, buckle then unbuckle the safety belt.

- This will disable Belt Minder if it is currently enabled, or enable Belt Minder if it is currently disabled.

7. Confirmation of disabling Belt Minder is provided by the safety belt warning light flashing four times per second for three seconds.

8. Confirmation of enabling Belt Minder is provided by:

- The safety belt warning light flashing four times per second for three seconds.
- Followed by three seconds with the safety belt warning light off.
- Once again, the safety belt warning light will flash four times per second for three seconds.

9. After receiving confirmation, the deactivation/activation procedure is complete.

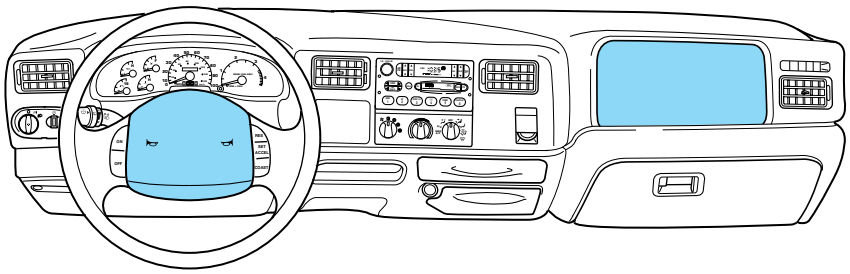
Safety belt maintenance

Inspect the safety belt systems periodically to make sure they work properly and are not damaged. Inspect the safety belts to make sure there are no nicks, tears or cuts. Replace if necessary. All safety belt assemblies, including retractors, buckles, front seat belt buckle assemblies, buckle support assemblies (slide bar-if equipped), shoulder belt height adjusters (if equipped), shoulder belt guide on seatback (if equipped), child safety seat tether bracket assemblies (if equipped), LATCH child seat tether anchors and lower anchors (if equipped), and attaching hardware, should be inspected after a collision. Ford recommends that all safety belt assemblies used in vehicles involved in a collision be replaced. However, if the collision was minor and a qualified technician finds that the belts do not show damage and continue to operate properly, they do not need to be replaced. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

Failure to inspect and if necessary replace the safety belt assembly under the above conditions could result in severe personal injuries in the event of a collision.

Refer to *Cleaning and maintaining the safety belts* in the *Maintenacne and Care* section.

AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

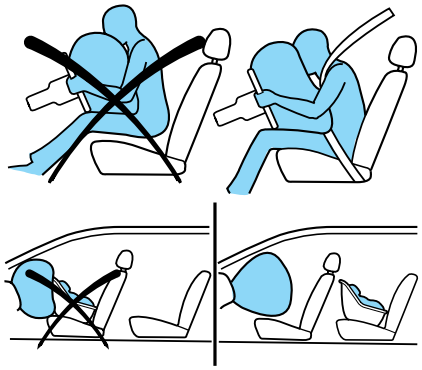


Your vehicle is equipped with a crash sensing and diagnostic module which records information about the air bag and sensor systems. In the event of a collision this module may save information related to the collision including information about the air bag system and impact severity. This information will assist Ford in the servicing of your vehicle and may help Ford better understand real world collisions and further improve the safety of future vehicles.

Important supplemental restraint system (SRS) precautions

The supplemental restraint system is designed to work with the safety belt to help protect the driver and right front passenger from certain upper body injuries.

Air bags DO NOT inflate slowly or gently and the risk of injury from a deploying air bag is greatest close to the trim covering the air bag module.



All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag SRS is provided.

Always transport children 12 years old and under in the back seat and always properly use appropriate child restraints.

National Highway Traffic Safety Administration (NHTSA) recommends a minimum distance of at least 25 cm (10 inches) between an occupant's chest and the driver air bag module.

Never place your arm over the air bag module as a deploying air bag can result in serious arm fractures or other injuries.

Steps you can take to properly position yourself away from the air bag:

- Move your seat to the rear as far as you can while still reaching the pedals comfortably.
- Recline the seat slightly (one or two degrees) from the upright position.

Do not put anything on or over the air bag module. Placing objects on or over the air bag inflation area may cause those objects to be propelled by the air bag into your face and torso causing serious injury.

Do not attempt to service, repair, or modify the air bag supplemental restraint systems or its fuses. Se your Ford or Lincoln Mercury dealer.

Modifications to the front end of the vehicle, including frame, bumper, front end body structure and tow hooks may affect the performance of the air bag sensors increasing the risk of injury. Do not modify the front end of the vehicle.

Additional equipment such as snowplow equipment may effect the performance of the air bag sensors increasing the risk of injury. Please refer to the Body Builders Layout Book for instructions about the appropriate installation of additional equipment.

Removing the blocker beam without installing snow plow attachment hardware may effect air bag deployment in a crash. Do not operate the truck unless either the blocker beam or snow plow attachment hardware is installed on the vehicle.

Children and air bags

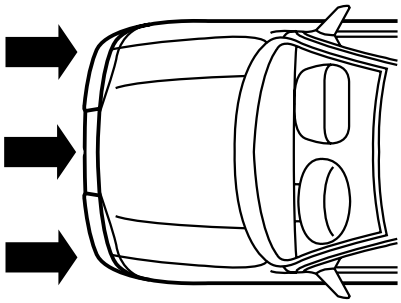
For additional important safety information, read all information on safety restraints in this guide.

Children must always be properly restrained. Failure to follow these instructions may increase the risk of injury in a collision.

An infant in a rear-facing seat faces a high risk of serious or fatal injuries from a deploying passenger air bag. Rear facing infant seats should NEVER be placed in the front seats, unless the passenger air bag is turned off. See *Passenger air bag ON/OFF switch.*

How does the air bag supplemental restraint system work?

The air bag SRS is designed to activate when the vehicle sustains sufficient longitudinal deceleration.



The fact that the air bags did not inflate in a collision does not mean that something is wrong with the system. Rather, it means the forces were not of the type sufficient to cause activation. Air bags are designed to inflate in frontal and near-frontal collisions, not rollover, side-impact, or rear-impacts.

The air bags inflate and deflate rapidly upon activation. After air bag deployment, it is normal to notice a smoke-like, powdery residue or smell the burnt propellant. This may consist of cornstarch, talcum powder (to lubricate the bag) or sodium compounds (e.g., baking soda) that result from the combustion process that inflates the air bag. Small amounts of sodium hydroxide may be present which may irritate the skin and eyes, but none of the residue is toxic.

While the system is designed to help reduce serious injuries, it may also cause minor abrasions, swelling or temporary hearing loss. Because air bags must inflate rapidly and with considerable force, there is the risk of death or serious injuries such as fractures, facial and eye injuries or internal injuries, particularly to occupants who are not properly restrained or are otherwise out of position at the time of air bag deployment. Thus, it is extremely important that occupants be properly restrained as far away from the air bag module as possible while maintaining vehicle control.

Several air bag system components get hot after inflation. Do not touch them after inflation.

If the air bag has deployed, **the air bag will not function again and must be replaced immediately.** If the air bag is not replaced, the unrepaired area will increase the risk of injury in a collision.

The SRS consists of:

- driver and passenger (if equipped) air bag modules (which include the inflators and air bags),
- one or more impact and safing sensors,
- a readiness light and tone
- and the electrical wiring which connects the components.

The diagnostic module monitors its own internal circuits and the supplemental air bag electrical system warning (including the impact sensors), the system wiring, the air bag system readiness light, the air bag back up power and the air bag ignitors.

Determining if the system is operational

The SRS uses a readiness light in the instrument cluster or a tone to indicate the condition of the system. Refer to the *Air bag readiness* section in the *Instrumentation* chapter. Routine maintenance of the air bag is not required.

A difficulty with the system is indicated by one or more of the following:

- The readiness light will either flash or stay lit.
- The readiness light will not illuminate immediately after ignition is turned on.
- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem and/or light are repaired.

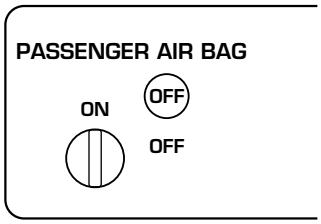
If any of these things happen, even intermittently, have the SRS serviced at your dealership or by a qualified technician immediately. Unless serviced, the system may not function properly in the event of a collision.

Disposal of air bags and air bag equipped vehicles (including pretensioners)

For disposal of air bags or air bag equipped vehicles, see your local dealership or qualified technician. Air bags MUST BE disposed of by qualified personnel.

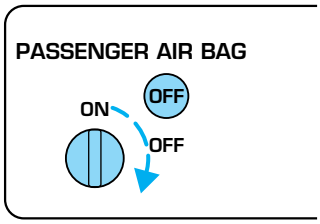
Passenger air bag ON/OFF switch (if equipped)

An air bag ON/OFF switch has been installed in this vehicle. Before driving, *always* look at the face of the switch to be sure the switch is in the proper position in accordance with these instructions and warnings. Failure to put the switch in a proper position can increase the risk of serious injury or death in a collision.



Turning the passenger air bag off

1. Insert the ignition key, turn the switch to OFF position and hold in OFF position while removing the key.
2. When the ignition is turned to the ON position the OFF light illuminates briefly, momentarily shuts off and then turns back on. This indicates that the passenger air bag is deactivated.



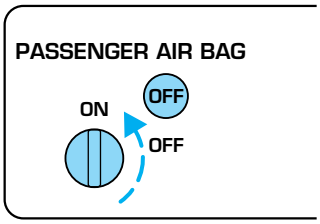
If the light fails to illuminate when the passenger air bag switch is in the OFF position and the ignition switch is in ON, have the passenger air bag switch serviced at your Ford or Lincoln-Mercury dealer immediately.

In order to avoid inadvertent activation of the switch, always remove the ignition key from the passenger air bag ON/OFF switch.

Turning the passenger air bag back on

The passenger air bag remains OFF until you turn it back ON.

1. Insert the ignition key and turn the switch to ON.
2. The OFF light will briefly illuminate when the ignition is turned to On. This indicates that the passenger air bag is operational.



If the light is illuminated when the passenger air bag switch is in the ON position and the ignition switch is in ON, have the passenger air bag switch serviced at your Ford or Lincoln-Mercury dealer immediately.

The passenger side air bag should always be ON (the air bag OFF light should *not* be illuminated) unless the passenger is a person who meets the requirements stated either in Category 1, 2 or 3 of the NHTSA/Transport Canada deactivation criteria which follows.

The safety belts for the driver and right front passenger seating positions have been specifically designed to function together with the air bags in certain types of crashes. When you turn OFF your air bag, you not only lose the protection of the air bag, you also may reduce the effectiveness of your safety belt system, which was designed to work with the air bag. If you are not a person who meets the requirements stated in the NHTSA/Transport Canada deactivation criteria turning OFF the air bag can increase the risk of serious injury or death in a collision.

Always transport children who are 12 and younger in the rear seat. Always use safety belts and child restraints properly. If a child in a rear facing infant seat must be transported in front, the passenger air bag *must* be turned OFF. This is because the back of the infant seat is too close to the inflating air bag and the risk of a fatal injury to the infant when the air bag inflates is substantial.

The vast majority of drivers and passengers are much safer with an air bag than without. To do their job and reduce the risk of life threatening injuries, air bags must open with great force, and this force can pose a potentially deadly risk in some situations, particularly when a front seat occupant is not properly buckled up. The most effective way to reduce the risk of unnecessary air bag injuries without reducing the overall safety of the vehicle is to make sure all occupants are properly restrained in the vehicle, especially in the front seat. This provides the protection of safety belts and permits the air bags to provide the additional protection they were designed to provide. If you choose to deactivate your air bag, you are losing the very significant risk reducing benefits of the air bag and you are also reducing the effectiveness of the safety belts, because safety belts in modern vehicles are designed to work as a safety system with the air bags.

Read all air bag Warning labels in the vehicle as well as the other important air bag instructions and Warnings in this Owner's Guide.

NHTSA deactivation criteria (excluding Canada)

1. **Infant.** An infant (less than 1 year old) must ride in the front seat because:

- the vehicle has no rear seat;
- the vehicle has a rear seat too small to accommodate a rear-facing infant seat; or
- the infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front so that the driver can constantly monitor the child's condition.

2. **Child age 1 to 12.** A child age 1 to 12 must ride in the front seat because:

- the vehicle has no rear seat;
- although children ages 1 to 12 ride in the rear seat(s) whenever possible, children ages 1 to 12 sometimes must ride in the front because no space is available in the rear seat(s) of the vehicle; or
- the child has a medical condition which, according to the child's physician, makes it necessary for the child to ride in the front seat so that the driver can constantly monitor the child's condition.

3. **Medical condition.** A passenger has a medical condition which, according to his or her physician:

- causes the passenger air bag to pose a special risk for the passenger; and
- makes the potential harm from the passenger air bag in a crash greater than the potential harm from turning OFF the air bag and allowing the passenger, even if belted, to hit the dashboard or windshield in a crash.

This vehicle has special energy management safety belts for the driver and/or right front passenger. These particular belts are specifically designed to work with air bags to help reduce the risk of injury in a collision. The energy management safety belt is designed to give or release additional belt webbing in some accidents to reduce concentration of force on an occupant's chest and reduce the risk of certain bone fractures and injuries to underlying organs. In a crash, if the air bag is turned OFF, this energy management safety belt might permit the person wearing the belt to move forward enough to incur a serious or fatal injury. The more severe the crash, and the heavier the occupant, the greater the risk is. Be sure the air bag is turned ON for any person who does not qualify under the NHTSA deactivation criteria.

Transport Canada deactivation criteria (Canada Only)

1. **Infant:** An infant (less than 1 year old) must ride in the front seat because:

- my vehicle has no rear seat;
- the rear seat in my vehicle cannot accommodate a rear-facing infant seat; or
- the infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front seat so that the driver can monitor the infant's condition.

2. **Child age 12 or under:** A child age 12 or under must ride in the front seat because:

- my vehicle has no rear seat;
- although children age 12 and under ride in the rear seat whenever possible, children age 12 and under have no option but to sometimes ride in the front seat because rear seat space is insufficient; or

- the child has a medical condition that, according to the child's physician, makes it necessary for the child to ride in the front seat so that the driver can monitor the child's condition.

3. **Medical condition:** A passenger has a medical condition that, according to his or her physician:

- poses a special risk for the passenger if the air bag deploys; and
- makes the potential harm from the passenger air bag deployment greater than the potential harm from turning OFF the air bag and experiencing a crash without the protection offered by the air bag

This vehicle has special energy management safety belts for the driver and/or right front passenger. These particular belts are specifically designed to work with air bags to help reduce the risk of injury in a collision. The energy management safety belt is designed to give or release additional belt webbing in some accidents to reduce concentration of force on an occupant's chest and reduce the risk of certain bone fractures and injuries to underlying organs. In a crash, if the air bag is turned OFF, this energy management safety belt might permit the person wearing the belt to move forward enough to incur a serious or fatal injury. The more severe the crash, and the heavier the occupant, the greater the risk is. Be sure the air bag is turned ON for any person who does not qualify under the Transport Canada deactivation criteria.

SAFETY RESTRAINTS FOR CHILDREN

See the following sections for directions on how to properly use safety restraints for children. Also see *Air Bag Supplemental Restraint System (SRS)* in this chapter for special instructions about using air bags.

Important child restraint precautions

You are required by law to use safety restraints for children in the U.S. and Canada. If small children ride in your vehicle (generally children who are four years old or younger and who weigh 18 kg [40 lbs] or less), you must put them in safety seats made especially for children. Check your local and state or provincial laws for specific requirements regarding the safety of children in your vehicle.

Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.

Always follow the instructions and warnings that come with any infant or child restraint you might use.

When possible, always place children under age 12 in the rear seat of your vehicle. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating position.

Children and safety belts

If the child is the proper size, restrain the child in a safety seat.

Children who are too large for child safety seats (as specified by your child safety seat manufacturer) should always wear safety belts.

Follow all the important safety restraint and air bag precautions that apply to adult passengers in your vehicle.

If the shoulder belt portion of a combination lap and shoulder belt can be positioned so it does not cross or rest in front of the child's face or neck, the child should wear the lap and shoulder belt. Moving the child closer to the center of the vehicle may help provide a good shoulder belt fit.

Do not leave children, unreliable adults, or pets unattended in your vehicle.

To improve the fit of lap and shoulder belts on children who have outgrown child safety seats, Ford recommends use of a belt-positioning booster seat that is labelled as conforming to all applicable Federal motor vehicle safety standards. Belt-positioning booster seats raise the child and provide a shorter, firmer seating cushion that encourages safer seating posture and better fit of lap and shoulder belts on the child.

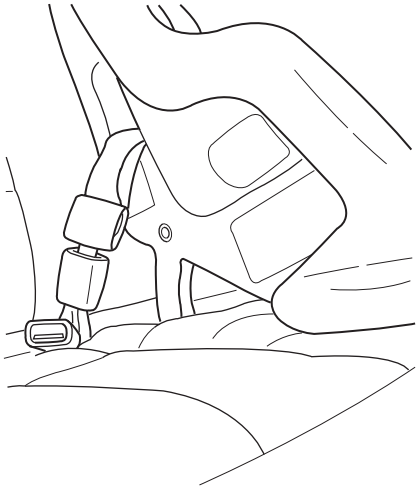
A belt-positioning booster seat should be used if the shoulder belt rests in front of the child's face or neck, or if the lap belt does not fit snugly on both thighs, or if the thighs are too short to let the child sit all the way back on the seat cushion when the lower legs hang over the edge of the seat cushion. You may wish to discuss the special needs of your child with your pediatrician.

SAFETY SEATS FOR CHILDREN

Child and infant or child safety seats

Use a safety seat that is recommended for the size and weight of the child. Carefully follow all of the manufacturer's instructions with the safety seat you put in your vehicle. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.

When installing a child safety seat:



- Review and follow the information presented in the *Air Bag Supplemental Restraint System* (SRS) section in this chapter.
- Use the correct safety belt buckle for that seating position (the buckle closest to the direction the tongue is coming from).
- Insert the belt tongue into the proper buckle until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.
- Keep the buckle release button pointing up and away from the safety seat, with the tongue between the child seat and the release button, to prevent accidental unbuckling.
- Place seat back in upright position.

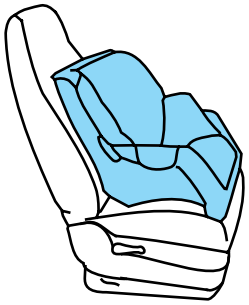
- Put the safety belt in the automatic locking mode. Refer to *Automatic locking mode* (passenger side front and outboard rear seating positions) (if equipped) section in this chapter.

Ford recommends the use of a child safety seat having a top tether strap. Install the child safety seat in a seating position which is capable of providing a tether anchorage. For more information on top tether straps, refer to *Attaching child safety seats with tether straps.* in this chapter.

Carefully follow all of the manufacturer's instructions included with the safety seat you put in your vehicle. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.

Installing child safety seats in combination lap and shoulder belt seating positions

1. Position the child safety seat in a seat with a combination lap and shoulder belt.

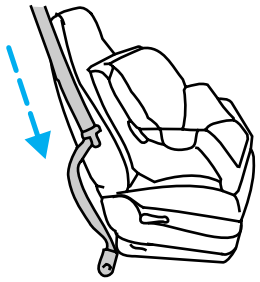


An air bag can kill or injure a child in a child seat. If you must use a forward-facing child seat in the front seat, move seat all the way back.

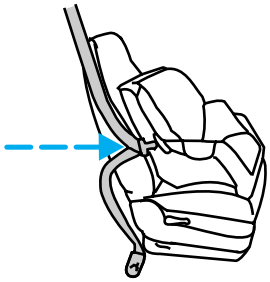
An air bag can kill or injure a child in a child seat. Child seats should never be placed in the front seats, unless passenger air bag switch is turned off, See *Passenger air bag on/off switch*.

Rear facing child seats should NEVER be placed in the front seats unless the passenger airbag switch is turned off.

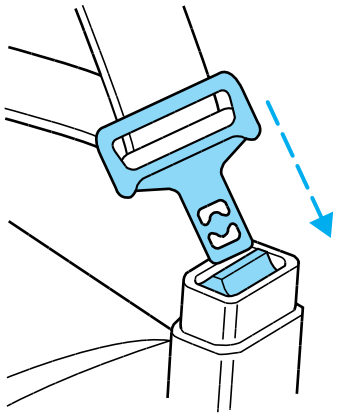
2. Pull down on the shoulder belt and then grasp the shoulder belt and lap belt together.



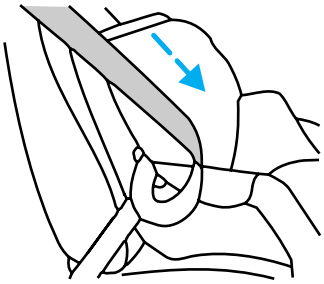
3. While holding the shoulder and lap belt portions together, route the tongue through the child seat according to the child seat manufacturer's instructions. Be sure the belt webbing is not twisted.



4. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) for that seating position until you hear and feel the latch engage. Make sure the tongue is latched securely by pulling on it.

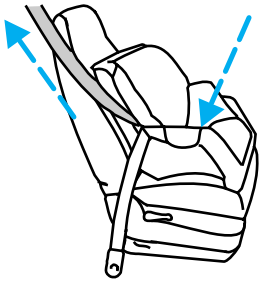


5. To put the retractor in the automatic locking mode, grasp the shoulder portion of the belt and pull downward until all of the belt is extracted and a click is heard.



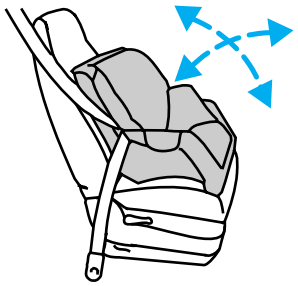
6. Allow the belt to retract. The belt will click as it retracts to indicate it is in the automatic locking mode.

7. Pull the lap belt portion across the child seat toward the buckle and pull up on the shoulder belt while pushing down with knee on the child seat.



8. Allow the safety belt to retract to remove any slack in the belt.

9. Before placing the child in the seat, forcibly tilt the seat forward and back to make sure the seat is securely held in place.



10. Try to pull the belt out of the retractor to make sure the retractor is in the automatic locking mode (you should not be able to pull more belt out). If the retractor is not locked, unbuckle the belt and repeat steps two through nine.

Check to make sure the child seat is properly secured before each use.

Attaching safety seats with tether straps

Some manufacturers make safety seats that include a tether strap that goes over the back of the vehicle seat and attaches to an anchoring point. Other manufacturers offer the tether strap as an accessory. Contact the manufacturer of your child safety seat for information about ordering a tether strap.

Tether anchorage hardware

A tethered seat can be installed in the front seat. Put the tether strap over the seatback and attach it to an anchor bracket.

An anchor bracket can be installed to the inside of the back panel of your vehicle.

The anchor bracket must be installed using the instructions provided with the tether anchorage hardware kit.

Tether anchorage hardware kits (part number 613D74) including instructions, may be obtained at no charge from any Ford or Lincoln/Mercury dealer.

If you have a Super Cab or Crew Cab, Ford recommends you attach tether safety seats in the rear seating position (if possible) with the tether strap attached to the tether anchorage bracket as shown in the instructions provided with the tether anchor kit.

Tighten the anchor according to specifications. Otherwise, the safety seat may not be properly secured and the child may be injured in a sudden stop or collision.

Attaching child safety seats with tether straps

Most new forward-facing child safety seats include a tether strap which goes over the back of the seat and hooks to an anchoring point. Tether straps are available as an accessory for many older safety seats. Contact the manufacturer of your child seat for information about ordering a tether strap.

The passenger seats of your vehicle may be equipped with built-in tether strap anchors located behind the seats as described below.

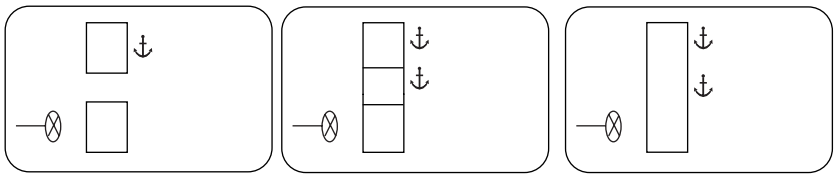
The tether anchors in your vehicle may be straps on the seatback or an anchor bracket on the rear edge of the seat cushion or an anchor bracket mounted to the body shell on the back panel.

The SuperCab rear seat has three straps behind the top of the seat back that function as both routing loops for the tether straps and anchor loops.

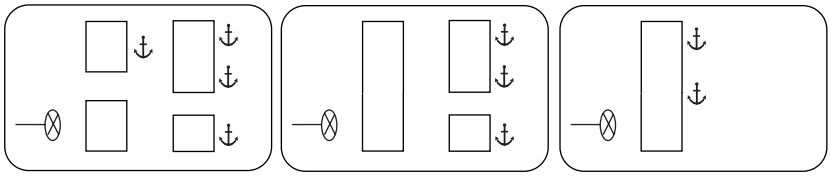
The tether strap anchors in your vehicle are in the following positions (shown from top view):

Attach the tether strap only to the appropriate tether anchor as shown. The tether strap may not work properly if attached somewhere other than the correct tether anchor.

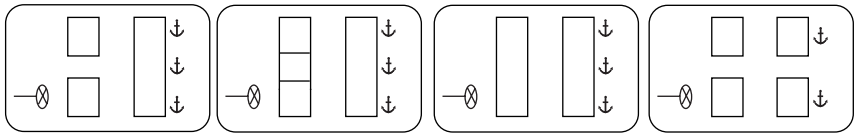
- **F—Series Regular Cab**



- **F—Series SuperCab**



- **F—Series Crew Cab**



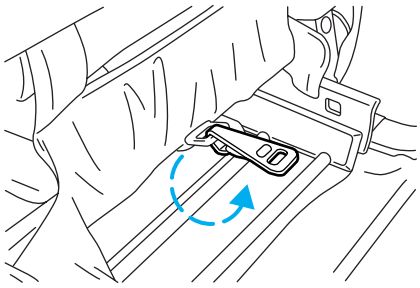
Tether strap attachment

1. Position the child safety seat on the seat cushion.
2. Route the child safety seat tether strap over the back of the seat.
3. Locate the correct anchor for the selected seating position.

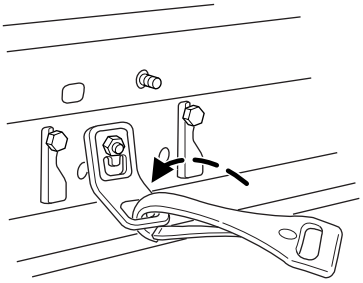
4. You may need to pull the seatback forward to access the tether anchors. Make sure the seat is locked in the upright position before installing the child seat. Refer to the *Folding down the rear seats* section in this chapter for information on how to operate the rear seats.

5. Clip the tether strap to the anchor as shown.

- Front seat (SuperCab only)



- Front seats (Regular Cab) and Rear seats (Crew Cab only)



If the tether strap is clipped incorrectly, the child safety seat may not be retained properly in the event of a collision.

6. Refer to the *Installing child safety seats in combination lap and shoulder belt seating positions* section of this chapter for further instructions to secure the child safety seat.

7. Tighten the child safety seat tether strap according to the manufacturer's instructions.

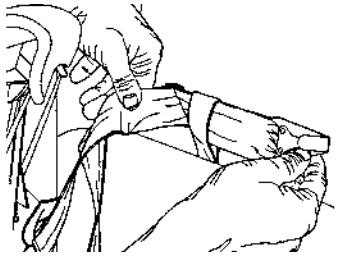
If the safety seat is not anchored properly, the risk of a child being injured in a collision greatly increases.

Tether strap attachment rear SuperCab only

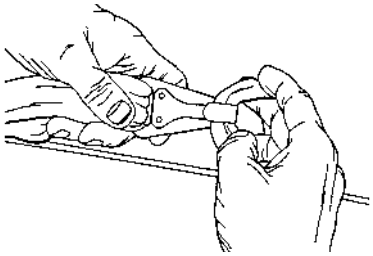
There are three loops of webbing just above the back of the rear seat (along the bottom edge of the rear window) in the SuperCab. These loops are to be used as both routing loops and anchor loops for child safety seat tether straps.

Many tether straps cannot be tightened if the tether strap is hooked to the loop directly behind the child seat. To provide a tight tether strap:

1. Route the tether strap through the loop directly behind the child seat.

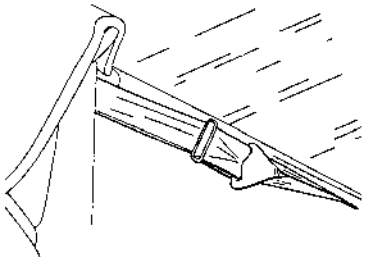


2. Attach the strap hook onto the loop behind an adjacent seating position.



3. Install the child safety seat tightly using the vehicle belts. Follow the instructions in this chapter.

4. Tighten the tether strap according to the child seat manufacturer's instructions.



A single loop can be used to route and anchor more than one child seat. For example, the center loop can be used as a routing loop for a child safety seat in the center rear seat and as an anchoring loop for child seats installed in the outboard rear seats.

Starting

PREPARING TO START YOUR VEHICLE

Engine starting is controlled by the powertrain control system. This system meets all Canadian Interference-Causing Equipment standard requirements regulating the impulse electrical field strength of radio noise.

When starting a fuel-injected engine, avoid pressing the accelerator before or during starting. Only use the accelerator when you have difficulty starting the engine. For more information on starting the vehicle, refer to *Starting the engine* in this chapter.

Extended idling at high engine speeds can produce very high temperatures in the engine and exhaust system, creating the risk of fire or other damage.

Do not park, idle, or drive your vehicle in dry grass or other dry ground cover. The emission system heats up the engine compartment and exhaust system, which can start a fire.

Do not start your vehicle in a closed garage or in other enclosed areas. Exhaust fumes can be toxic. Always open the garage door before you start the engine. See *Guarding against exhaust fumes* in this chapter for more instructions.

If you smell exhaust fumes inside your vehicle, have your dealer inspect your vehicle immediately. Do not drive if you smell exhaust fumes.

Important safety precautions

A computer system controls the engine's idle revolutions per minute (RPM). When the engine starts, the idle RPM runs faster to warm the engine. If the engine idle speed does not slow down automatically, have the vehicle checked. Do not allow the vehicle to idle for more than 10 minutes at high engine RPM.

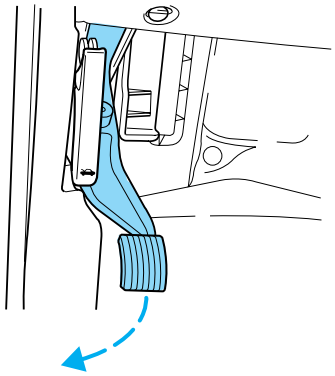
Before starting the vehicle:

1. Make sure all vehicle occupants have buckled their safety belts. For more information on safety belts and their proper usage, refer to the *Seating and safety restraints* chapter.

2. Make sure the headlamps and vehicle accessories are off.

If starting a vehicle with an automatic transmission:

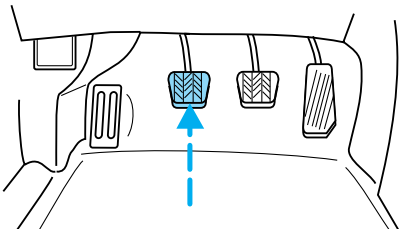
- Make sure the parking brake is set.



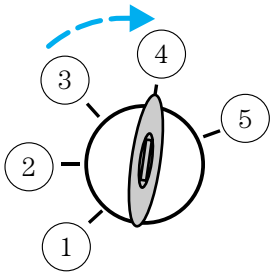
- Make sure the gearshift is in P (Park).

If starting a vehicle with a manual transmission:

- Make sure the parking brake is set.
- Push the clutch pedal to the floor.

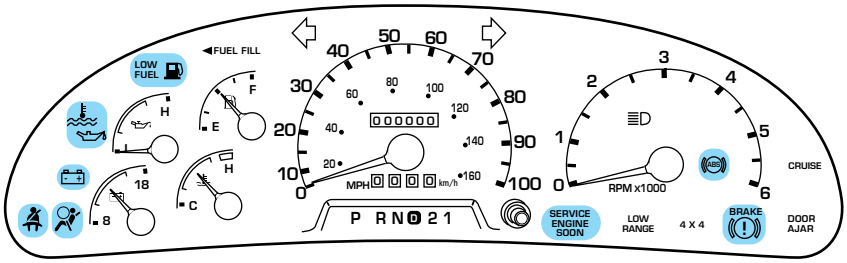


3. Turn the key to 4 (ON) without turning the key to 5 (START).



If there is difficulty in turning the key, firmly rotate the steering wheel left and right until the key turns freely. This condition may occur when:

- front wheels are turned
- front wheel is against the curb
- steering wheel is turned when getting in or out of the vehicle

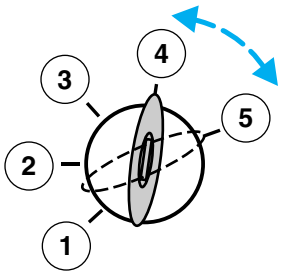


Make sure the corresponding lights illuminate or illuminate briefly. If a light fails to illuminate, have the vehicle serviced.

- If the driver's safety belt is fastened, the light may not illuminate.

STARTING THE ENGINE

NOTE: Whenever you start your vehicle, release the key as soon as the engine starts. Excessive cranking could damage the starter.



1. Turn the key to 5 (START) without pressing the accelerator pedal and release as soon as the engine starts. The key will return to 4 (ON).

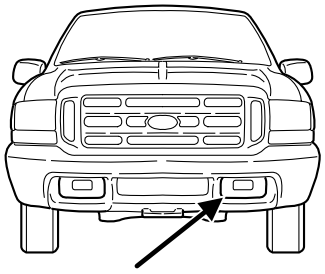
2. If the temperature is above –12°C (10°F) and the engine does not start within five seconds on the first try, turn the key to OFF, wait 10 seconds and try again.

3. If the temperature is below -12° C (10° F) and the engine does not start in 15 seconds on the first try, turn the key OFF and wait 10 seconds and try again. If the engine does not start in two attempts, press the accelerator pedal all the way to floor and hold. Turn the key to START position.

4. When the engine starts, release the key, then release the accelerator pedal gradually as the engine speeds up.

5. After idling for a few seconds, apply the brake and release the parking brake.

Using the engine block heater (if equipped)



An engine block heater warms the engine coolant, which improves starting, warms up the engine faster and allows the heater-defroster system to respond quickly. Use of an engine block heater is strongly recommended if you live in a region where temperatures reach -23°C (-10°F) or below.

For best results, plug the heater in at least three hours before starting the vehicle. Using the heater for longer than three hours will not harm the engine, so the heater can be plugged in the night before starting the vehicle.

To prevent electrical shock, do not use your heater with ungrounded electrical systems or two-pronged (cheater) adapters.

Guarding against exhaust fumes

Although odorless and colorless, carbon monoxide is present in exhaust fumes. Take precautions to avoid its dangerous effects.

If you ever smell exhaust fumes of any kind inside your vehicle, have your dealer inspect and fix your vehicle immediately. Do not drive if you smell exhaust fumes. These fumes are harmful and could kill you.

Have the exhaust and body ventilation systems checked whenever:

- the vehicle is raised for service
- the sound of the exhaust system changes
- the vehicle has been damaged in a collision

Starting

WARNING: Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. In addition, certain fluids contained in vehicles and certain products of component wear contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Important ventilating information

If the engine is idling while the vehicle is stopped in an open area for long periods of time, open the windows at least 2.5 cm (one inch).

Adjust the heating or air conditioning (if equipped) to bring in fresh air.

Improve vehicle ventilation by keeping all air inlet vents clear of snow, leaves and other debris.

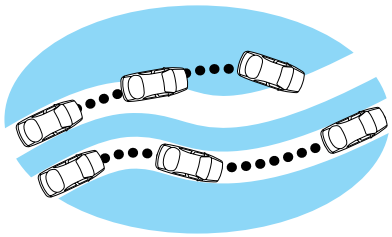
BRAKES

Your service brakes are self-adjusting. Refer to the scheduled maintenance guide for scheduled maintenance.

Occasional brake noise is normal and often does not indicate a performance concern with the vehicle's brake system. In normal operation, automotive brake systems may emit occasional or intermittent squeal or groan noises when the brakes are applied. Such noises are usually heard during the first few brake applications in the morning; however, they may be heard at any time while braking and can be aggravated by environmental conditions such as cold, heat, moisture, road dust, salt or mud. If a "metal-to-metal," "continuous grinding" or "continuous squeal" sound is present while braking, the brake linings may be worn-out and should be inspected by a qualified service technician.

Four-wheel anti-lock brake system (ABS)

This vehicle is equipped with an anti-lock braking system (ABS). A noise from the hydraulic pump motor and pulsation in the pedal may be observed during ABS braking events. Pedal pulsation coupled with noise while braking under panic conditions or on loose gravel, bumps, wet or snowy roads is normal and indicates proper functioning of the vehicle's anti-lock brake system. If the vehicle has continuous vibration or shudder in the steering wheel while braking, the vehicle should be inspected by a qualified service technician.



The ABS operates by detecting the onset of wheel lockup during brake applications and compensates for this tendency. The wheels are prevented from locking even when the brakes are firmly applied. The accompanying illustration depicts the advantage of an ABS equipped vehicle (on bottom) to a non-ABS equipped vehicle (on top) during hard braking with loss of front braking traction.

Using four wheel ABS

- In an emergency or when maximum efficiency from the four wheel ABS is required, apply continuous force on the brake. The four wheel ABS will be activated immediately, thus allowing you to retain full steering control of your vehicle and, providing there is sufficient space, will enable you to avoid obstacles and bring the vehicle to a controlled stop.
- The anti-lock system does not decrease the time necessary to apply the brakes or always reduce stopping distance. Always leave enough room between your vehicle and the vehicle in front of you to stop.
- We recommend that you familiarize yourself with this braking technique. However, avoid taking any unnecessary risks.

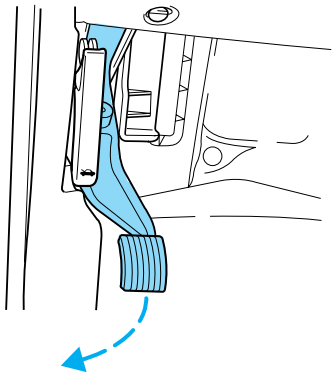
ABS warning lamp (ABS)

The (ABS) warning lamp in the instrument cluster momentarily illuminates when the ignition is turned to the ON position. If the light does not illuminate momentarily at start up, remains on or continues to flash, the ABS needs to be serviced.

With the ABS light on, the anti-lock brake system is disabled and normal braking is still effective unless the brake warning light also remains illuminated with parking brake released. (If your brake warning lamp illuminates, have your vehicle serviced immediately.)

Parking brake

Apply the parking brake whenever the vehicle is parked. To set the parking brake, press the parking brake pedal down until the pedal stops.

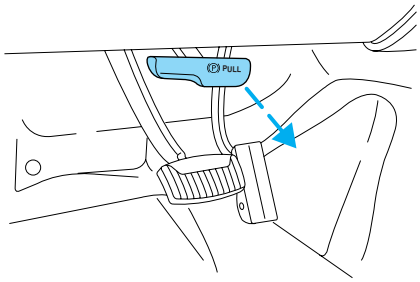


The BRAKE warning lamp in the instrument cluster illuminates and remains illuminated (when the ignition is turned ON) until the parking brake is released.

Always set the parking brake fully and make sure that the gearshift is securely latched in P (Park) (automatic transmission) or in 1 (First) (manual transmission).

The parking brake is not recommended to stop a moving vehicle. However, if the normal brakes fail, the parking brake can be used to stop your vehicle in an emergency. Since the parking brake applies only the rear brakes, the vehicle's stopping distance will increase greatly and the handling of your vehicle will be adversely affected.

Pull the release lever to release the brake. Driving with the parking brake on will cause the brakes to wear out quickly and reduce fuel economy.



STEERING YOUR VEHICLE

Your vehicle is equipped with power steering. Power steering uses energy from the engine to help steer the vehicle.

Never hold the steering wheel to the extreme right or the extreme left position for more than a few seconds when the engine is running. This action could damage the power steering pump.

If the amount of effort needed to steer your vehicle changes at a constant vehicle speed, have the power steering system checked. If the power steering system breaks down (or if the engine is turned off), you can steer the vehicle manually, but it takes more effort.

After any severe impact such as striking large potholes, sliding into curbs on icy roads or a collision involving the front end, have the front suspension and steering checked for possible damage.

TRACTION-LOK AXLE (IF EQUIPPED)

This axle provides added traction on slippery surfaces, particularly when one wheel is on a poor traction surface. Under normal conditions, the Traction-Lok axle functions like a standard rear axle.

Extended use of other than the manufacturer's specified size tires on a Traction-Lok rear axle could result in a permanent reduction in effectiveness. This loss of effectiveness does not affect normal driving and should not be noticeable to the driver.

To avoid injury, never run the engine with one wheel off the ground, such as when changing a tire.

PREPARING TO DRIVE YOUR VEHICLE

Utility vehicles have a significantly higher rollover rate than other types of vehicles.

In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt.

Your vehicle has special design and equipment features to make it capable of performing in a wide variety of circumstances. These special design features, such as larger tires and increased ground clearance, give the vehicle a higher center of gravity than a passenger car.

Vehicles with a higher center of gravity such as utility and four-wheel drive vehicles handle differently than vehicles with a lower center of gravity. Utility and four-wheel drive vehicles are **not** designed for cornering at speeds as high as passenger cars any more than low-slung sports cars are designed to perform satisfactorily under off-road conditions. Avoid sharp turns, excessive speed and abrupt maneuvers in these vehicles. Failure to drive cautiously could result in an increased risk of vehicle rollover, personal injury and death.

Loaded vehicles, with a higher center of gravity, may handle differently than unloaded vehicles. Extra precautions, such as slower speeds and increased stopping distance, should be taken when driving a heavily loaded vehicle.

Your vehicle has the capability to haul more cargo and people than most passenger cars. Depending upon the type and placement of the load, hauling people and cargo may raise the center of gravity of the vehicle.

Use extra caution while becoming familiar with your vehicle. Know the capabilities and limitations of both you as a driver and your vehicle.

AUTOMATIC TRANSMISSION OPERATION (IF EQUIPPED)

Brake-shift interlock

This vehicle is equipped with a brake-shift interlock feature that prevents the gearshift lever from being moved from P (Park) when the ignition is in the ON position unless brake pedal is depressed.

If you cannot move the gearshift lever out of P (Park) with ignition in the ON position and the brake pedal depressed:

1. Apply the parking brake, turn ignition to the LOCK position, then remove the key.
2. Reinsert the key and turn the ignition to the OFF position.
3. Press and hold down the brake pedal and shift into N (Neutral).
4. Start the vehicle.

If it is necessary to use the above procedure to move the gearshift lever, it is possible that a fuse has blown or the vehicle's brakelamps are not operating properly. Refer to *Fuses and relays* in the *Roadside emergencies* chapter.

Do not drive your vehicle until you verify that the brakelamps are working.

If your vehicle gets stuck in mud or snow it may be rocked out by shifting from forward and reverse gears, stopping between shifts, in a steady pattern. Press lightly on the accelerator in each gear.

Do not rock the vehicle for more than a few minutes. The transmission and tires may be damaged or the engine may overheat.

Always set the parking brake fully and make sure the gearshift is latched in P (Park). Turn off the ignition whenever you leave your vehicle.

If the parking brake is fully released, but the brake warning lamp remains illuminated, the brakes may not be working properly. See your dealer or a qualified service technician.

Driving with a 4–speed automatic transmission

Understanding gearshift positions

To put your vehicle in gear, start the engine, depress the brake pedal, then move gearshift lever out of P (Park).

Hold the brake pedal down while you move the gearshift lever from P (Park) to another position. If you do not hold the brake pedal down, your vehicle may move unexpectedly and injure someone.

P (Park)

Always come to a complete stop before shifting into P (Park). Make sure the gearshift lever is securely latched in P (Park). This position locks the transmission and prevents the rear wheels from turning.

Always set the parking brake fully and make sure the gearshift lever is latched in P (Park). Turn off the ignition whenever you leave your vehicle.

R (Reverse)

With the gearshift lever in R (Reverse), the vehicle will move backward. Always come to a complete stop before shifting into and out of R (Reverse).

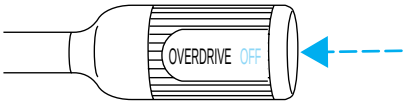
N (Neutral)

With the gearshift lever in N (Neutral), the vehicle can be started and is free to roll. Hold the brake pedal down while in this gear.

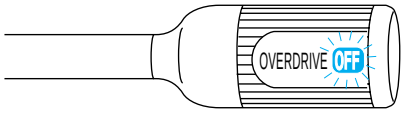
(D) *(Overdrive)*

The normal driving position for the best fuel economy. Transmission operates in gears one through four.

(D) (Overdrive) can be deactivated by pressing the transmission control switch (TCS) on the end of the gearshift lever.



The transmission control indicator light (TCIL) (the word OFF) on the end of the gearshift lever will illuminate.



Drive – Not shown on the display. Activate by pressing the transmission control switch (TCS) on the end of the gearshift lever with the gearshift in the (D) position. The TCIL (the word OFF) will illuminate on the gearshift lever. Transmission operates in gears one through three. (D) (Drive) provides more engine braking than (D) (Overdrive) and is useful when:

- driving with a heavy load.
- towing a trailer up or down steep hills.
- additional engine downhill braking is desired. If towing a trailer, refer to *Driving while you tow* in the *Trailer towing* section.

To return to (D) (Overdrive) mode, press the transmission control switch (TCS). The TCIL (the word OFF) will no longer be illuminated.

Each time the vehicle is started, the transmission will automatically return to normal overdrive mode.

Every time the vehicle is shut off and restarted, you must press the transmission control switch to cancel overdrive operation if driving in overdrive is not desired.

2 (Second)

Use 2 (Second) to start-up on slippery roads or to provide additional engine braking on downgrades.

1 (First)

Use 1 (Low) to provide maximum engine braking on steep downgrades. Upshifts can be made by shifting to 2 (Second) or to D (Overdrive). Selecting 1 (Low) at higher speeds causes the transmission to shift to a lower gear, and will shift to 1 (Low) after vehicle decelerates to the proper speed.

Forced Downshifts

To gain acceleration in D (Overdrive) or Drive (O/D OFF) when passing another vehicle, push the accelerator to the floor. The transmission will downshift to the appropriate gear: third, second or first gear.

Shift strategy (4R100 automatic transmission)

To account for customer driving habits and conditions, your 4R100 automatic transmission electronically controls the shift quality by using an adaptive learning strategy. The adaptive learning strategy is maintained by power from the battery. When the battery is disconnected or a new battery is installed, the transmission must relearn its adaptive strategy. Optimal shifting will resume within a few hundred kilometers (miles) of operation.

If the shift quality does not improve within a few hundred kilometers (miles) of operation, or if the downshifts and other throttle conditions do not function normally, see your dealer or a qualified service technician as soon as possible.

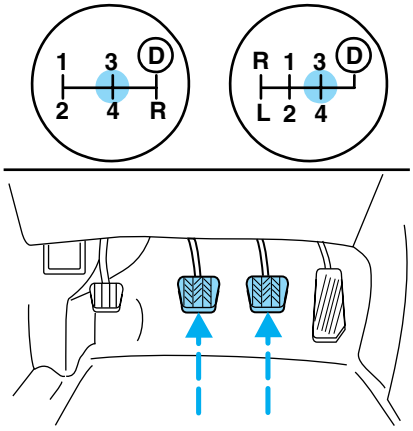
MANUAL TRANSMISSION OPERATION (IF EQUIPPED)

Using the clutch

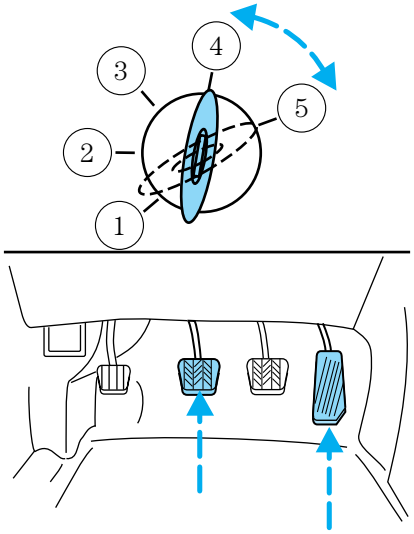
Vehicles equipped with a manual transmission have a starter interlock that prevents cranking the engine unless the clutch pedal is fully depressed.

When starting a vehicle with a manual transmission, you must:

1. Make sure the parking brake is fully set.
2. Depress the clutch pedal fully.
3. Put the gearshift lever in N (Neutral).



4. Turn the ignition to position 5 (START) to start the engine, let the engine idle for a few seconds.
5. Depress the brake pedal.
6. Release the parking brake.
7. Move the gearshift lever to the desired gear.
8. Release the brake pedal.
9. Slowly release the clutch pedal while slowly pressing down on the accelerator pedal.



- Do not drive with your foot resting on the clutch pedal and do not use the clutch to hold your vehicle at a standstill while waiting on a hill. These actions will greatly reduce clutch life.

Recommended shift speeds

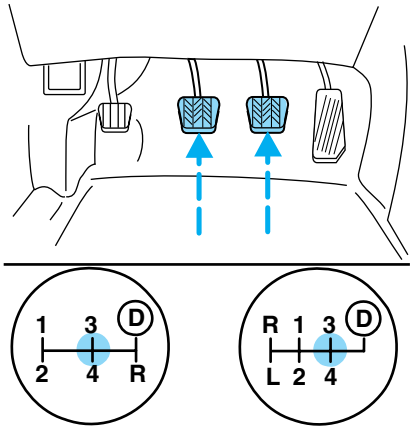
Downshift according to the following charts for your specific engine/drivetrain combination:

Maximum downshift speeds[1]		
5-speed transmission		
Shift from:	Transfer case position (if equipped)[2]	
	2H or 4H	4L
Ⓓ (Overdrive) - 4	72 km/h (45 mph)	35 km/h (22 mph)
4 - 3	56 km/h (35 mph)	23 km/h (14 mph)
3 - 2	32 km/h (20 mph)	13 km/h (8 mph)
2 - 1	8 km/h (5 mph)	0 km/h (0 mph)
[1] Use 2H or 4H for 4WD equipped vehicles.		
[2] Downshift at lower speeds when driving on slippery surfaces.		

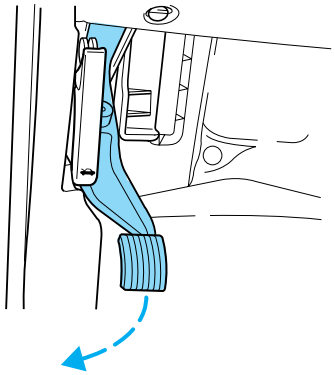
Maximum downshift speeds[1]		
6-speed transmission		
Shift from:	Transfer case position (if equipped)[2]	
	2H or 4H	4L
Ⓓ (Overdrive) - 4	72 km/h (45 mph)	26 km/h (16 mph)
4 - 3	56 km/h (35 mph)	19 km/h (12 mph)
3 - 2	32 km/h (20 mph)	13 km/h (8 mph)
2 - 1	8 km/h (5 mph)	3 km/h (2 mph)
1 - LO	Only shift to LO when at a stop.	
[1] Use 2H or 4H for 4WD equipped vehicles.		
[2] Downshift at lower speeds when driving on slippery surfaces.		

Parking your vehicle

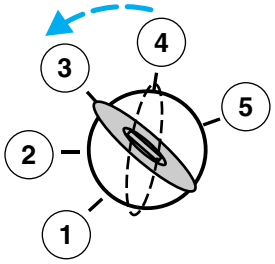
1. Disengage the clutch, apply brake and shift into N (Neutral).



2. Set parking brake.
3. Shift into 1 (First).



4. Turn the ignition key to position 3 (OFF).



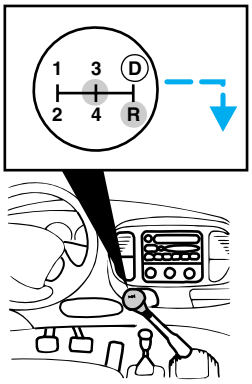
Do not park your vehicle in Neutral, it may move unexpectedly and injure someone. Use 1 (First) gear and set the parking brake fully.

Reverse

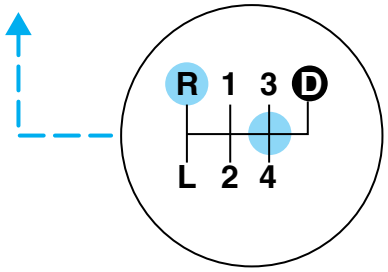
Make sure that your vehicle is at a complete stop before you shift into R (Reverse). Failure to do so may damage the transmission.

Put the gearshift lever in N (Neutral) and wait at least three seconds before shifting into R (Reverse).

With the 5–speed transmission you can shift into R (Reverse) only by moving the gearshift lever from left of 3 (Third) and 4 (Fourth) gears before you shift into R (Reverse). This is a special lockout feature that protects you from accidentally shifting into R (Reverse) when you downshift from (D) (Overdrive).

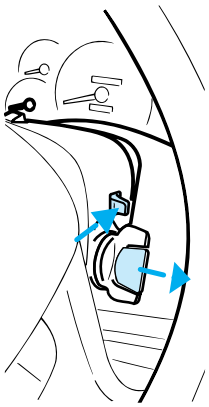


With the 6–speed transmission you can shift into R (Reverse) by moving the gearshift to the extreme left from N (Neutral).



Removing key from ignition

- Turn the ignition key to position 2.
- Push the release lever forward and rotate the key towards you and remove.



POWER TAKE OFF (PTO) CAPABILITY (IF EQUIPPED)

Some vehicles equipped with an automatic transmission and the 6.8L or 7.3L engine are also equipped with Power Take Off (PTO) capability. These vehicles have a special transmission case, internal components and calibration for PTO usage.

The PTO can be used during mobile and stationary continuous/intermittent applications.

PTO operation is disabled while the vehicle is in Overdrive (the TCIL will not be illuminated), in N (Neutral), during engine cranking. Transmission upshift and downshift schedules will be reduced by about 15% and will have a firmer shift feel during PTO mobile applications.

The PTO cannot be disabled while the transmission is in Manual 3 (Overdrive position with Overdrive canceled), Manual 2, Manual 1.

Refer to the *Body Builder's Layout Book* for recommended electrical installation.

FOUR-WHEEL DRIVE (4WD) OPERATION (IF EQUIPPED)

For important information regarding safe operation of this type of vehicle, see **Preparing to drive your vehicle** in this chapter.

When four–wheel drive (4WD) is engaged, power is supplied to all four wheels through a transfer case. 4WD power can be selected when additional driving power is desired.

If equipped with the Electronic Shift 4WD System, and the instrument panel control is moved to 4WD Low while the vehicle is moving, the system will not engage and no damage will occur to the 4WD system. Before 4WD Low can be engaged, the vehicle must be brought to a complete stop with the brake pedal depressed and the transmission placed in neutral (or the clutch pedal depressed on manual transmissions).

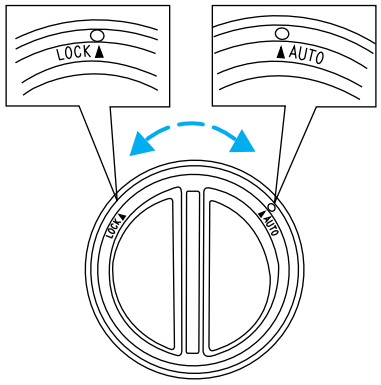
4WD operation is not recommended on dry pavement. Doing so could result in difficult disengagement of the transfer case, increased tire wear and decreased fuel economy.

Electronic shift on the fly (ESOF) 4x4 system (if equipped)

The 4WD system:

- provides 4x4 High engagement and disengagement while the vehicle is moving.
- is operated by a rotary control located on the instrument panel that allows you select 2WD, 4x4 High or 4x4 Low operation.
- uses hub locks that can be engaged and disengaged automatically by using a rotary control located on the instrument panel.

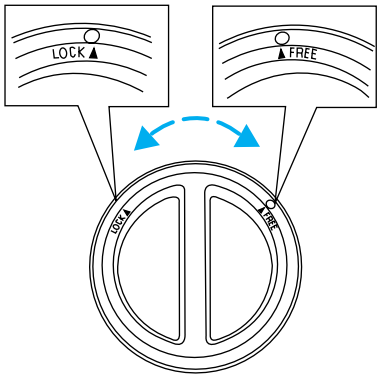
- automatic hub locks can be manually overridden by rotating the hub lock control from AUTO to LOCK. Automatic operation of the hub locks is recommended.
- **For proper operation, make sure that the arrow and the indicator dot on the hub are aligned.**



Manual 4x4 system (if equipped)

The 4WD system is engaged or disengaged by rotating the control for both front wheel hub locks from the FREE or LOCK position, then manually engaging or disengaging the transfer case with the floor-mounted shifter.

- **For proper operation, make sure that the arrow and the indicator dot on the hub are aligned.**



4WD system indicator lights

The 4WD system indicator lights illuminate only under the following conditions. If these lights illuminate when driving in 2WD, contact your Ford dealer as soon as possible.

- **4x4**-momentarily illuminates after the engine is started. Illuminates when 4H (4x4 High) or 4L (4x4 Low) is engaged.

4x4

- **LOW RANGE**–momentarily illuminates when the ignition is turned to the ON position. Illuminates when 4L (4x4 Low) is engaged.

LOW
RANGE

Using a manual 4WD system (if equipped)

2H (2WD High) – Power to rear axle only.

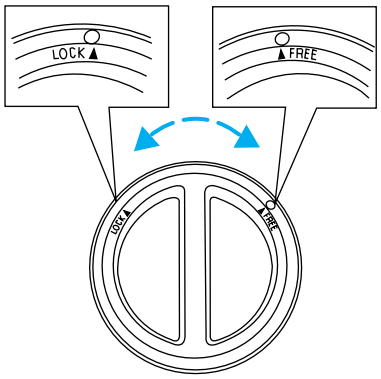
4H (4WD High) – Power to front and rear axles.

N (Neutral) – No power to either axle.

4L (4WD Low)– Power to front and rear axles at reduced speed.

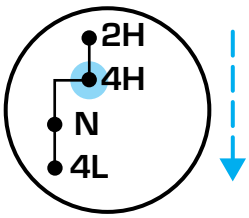
Shifting from 2H (2WD high) to 4H (4WD high)

Engage the locking hubs by rotating the hub lock control from FREE to LOCK, then move the transfer case lever from 2H (2WD High) to 4H (4WD High).



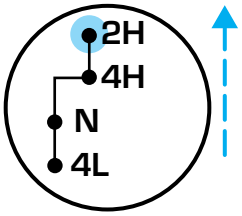
- **For proper operation, make sure that the arrow and the indicator dot on the hub are aligned.**

Do not shift into 4H (4WD High) with the rear wheels slipping.



Shifting from 4H (4WD high) to 2H (2WD high)

Move the transfer case lever to 2H (2WD High) at a stop or any forward speed up to 88 km/h (55 mph).

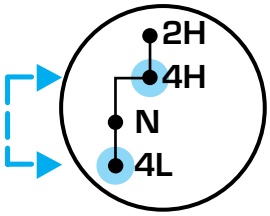


With the vehicle at complete stop, disengage the locking hubs (optional) by rotating the hub lock control from LOCK to FREE.

- **For proper operation, make sure that the arrow and the indicator dot on the hub are aligned.**

Shifting from 4H (4WD high) to 4L (4WD low)

1. Bring the vehicle to a complete stop.
2. Depress the brake.
3. Place the gearshift lever in N (Neutral) (automatic transmission) or depress the clutch (manual transmission).
4. Move the transfer case shift lever through N (Neutral) directly to 4L (4WD Low) and hold the shift lever in 4L (4WD Low) until the transfer case has fully engaged (up to 15 seconds).



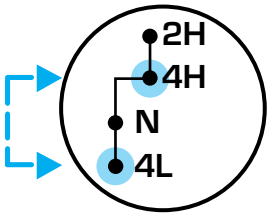
5. If the transfer case **does not** engage into 4L (4WD Low), repeat steps 1 through 4.

Shifting from 4L (4WD low) to 4H (4WD high) or 2H (2WD high)

1. Bring the vehicle to a complete stop.
2. Depress the brake.
3. Place the gearshift lever in N (Neutral) (automatic transmission) or depress the clutch (manual transmission).

4. Move the transfer case shift lever through N (Neutral) directly to 4H (4WD High) or 2H (2WD high) and hold the shift lever in position until the transfer case has fully engaged (up to 15 seconds).

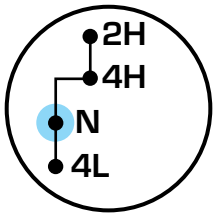
5. If the transfer case **does not** engage, repeat steps 1 through 4.



Using the N (Neutral) position

The transfer case neutral position overrides the transmission and puts the vehicle in neutral regardless of transmission gearshift lever position. The vehicle can move forward or backwards.

This position should only be used when towing the vehicle.



Do not leave the vehicle unattended with the transfer case in the N (Neutral) position. Always set the parking brake fully and turn off the ignition when leaving the vehicle.

Using the electronic shift 4WD system (if equipped)

Positions of the electronic shift system

To prevent damage, the electronic shift 4WD system is designed to allow up to 45 seconds before the shift command is performed. In the event that conflicting shift commands are selected, allow up to 45 seconds for the shift command to be performed prior to reporting any shift concerns to your dealer.

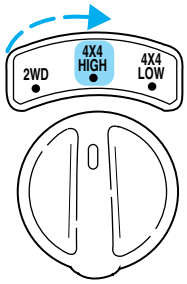
2WD (2WD High) – Power to rear axle only.

4x4 HIGH (4WD High) – Power delivered to front and rear axles for increased traction.

4x4 LOW (4WD Low) – Power to front and rear axles at low speeds.

Shifting from 2WD (2WD high) to 4x4 HIGH (4WD high)

Rotate the 4WD control to the 4x4 HIGH position at speeds up to 88 km/h (55 mph).

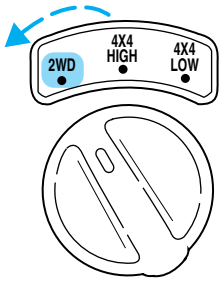


- **To prevent damage, the electronic shift 4WD system is designed to engage 4x4 HIGH (4WD high) when the vehicle is moving. If the 4x4 indicator light does not illuminate when shifting a vehicle that is stationary, start the vehicle moving. Once the vehicle is moving, 4x4 HIGH (4WD high) will engage and the 4x4 indicator will illuminate.**

Do not shift into 4x4 HIGH with the rear wheels slipping.

Shifting from 4x4 HIGH (4WD high) to 2WD (2WD high)

Rotate the 4WD control to 2WD at any forward speed. Disengagement of the transfer case and front hubs may be delayed due to torque bind which is caused by driving on dry hard surfaces or performing tight turns while using the 4WD system.



- You **do not** need to operate the vehicle in R (Reverse) to disengage your front hubs.

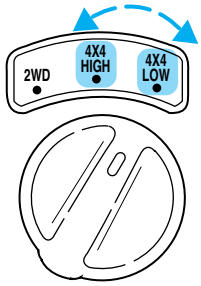
Shifting from 4x4 HIGH (4WD high) to 4x4 LOW (4WD low)

1. Bring the vehicle to a complete stop.
2. Depress the brake.
3. Place the gearshift in N (Neutral) (automatic transmission) or depress the clutch (manual transmission).

4. Move the 4WD control to the 4x4 LOW position.

5. Hold the shift command until the LOW RANGE indicator light illuminates.

6. If the LOW RANGE indicator light **does not** illuminate after 15 seconds, start the vehicle moving, then repeat steps 1 through 5 before reporting any shift concerns to your dealer.



Shifting from 4x4 LOW (4WD low) to 4x4 HIGH (4WD high) or 2WD (2WD high)

1. Bring the vehicle to a complete stop.

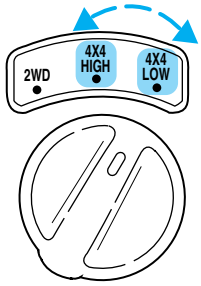
2. Depress the brake.

3. Place the gearshift in N (Neutral) (automatic transmission) or depress the clutch (manual transmission).

4. Move the 4WD control to the 4x4 HIGH (4WD high) or 2WD (2WD high) position.

5. Hold the shift command until the LOW RANGE indicator light shuts off.

6. If the LOW RANGE indicator light **does not** shut off after 15 seconds, start the vehicle moving, then repeat steps 1 through 5 before reporting any shift concerns to your dealer.



Driving off-road with 4WD

Your vehicle is specially equipped for driving on sand, snow, mud and rough terrain and has operating characteristics that are somewhat different from conventional vehicles, both on and off the road.

Maintain steering wheel control at all times, especially in rough terrain. Since sudden changes in terrain can result in abrupt steering wheel motion, make sure you grip the steering wheel from the outside. Do not grip the spokes.

Drive cautiously to avoid vehicle damage from concealed objects such as rocks and stumps.

You should either know the terrain or examine maps of the area before driving. Map out your route before driving in the area. For more information on driving off-road, read the “Four Wheeling” supplement in your owner’s portfolio.

If your vehicle gets stuck

If the vehicle is stuck it may be rocked out by shifting from forward and reverse gears, stopping between shifts, in a steady pattern. Press lightly on the accelerator in each gear.

Do not rock the vehicle if the engine is not at normal operating temperature or damage to the transmission may occur.

Do not rock the vehicle for more than a few minutes or damage to the transmission and tires may occur or the engine may overheat.

Do not spin the wheels at over 56 km/h (35 mph). The tires may fail and injure a passenger or bystander.

Sand

When driving over sand, try to keep all four wheels on the most solid area of the trail. Do not reduce the tire pressures but shift to a lower gear and drive steadily through the terrain. Apply the accelerator slowly and avoid spinning the wheels.

Mud and water

If you must drive through high water, drive slowly. Traction or brake capability may be limited.

When driving through water, determine the depth; avoid water higher than the bottom of the hubs (if possible) and proceed slowly. If the ignition system gets wet, the vehicle may stall.

Once through water, always try the brakes. Wet brakes do not stop the vehicle as effectively as dry brakes. Drying can be improved by moving your vehicle slowly while applying light pressure on the brake pedal.

After driving through mud, clean off residue stuck to rotating driveshafts and tires. Excess mud stuck on tires and rotating driveshafts causes an imbalance that could damage drive components.

If the transmission, transfer case or front axle are submerged in water, their fluids should be checked and changed, if necessary.

Water intrusion into the transmission may damage the transmission.

If the front or rear axle is submerged in water, the axle lubricant should be replaced.

Driving on hilly or sloping terrain

When driving on a hill, avoid driving crosswise or turning on steep slopes. You could lose traction and slip sideways. Drive straight up, straight down or avoid the hill completely. Know the conditions on the other side of a hill before driving over the crest.

When climbing a steep hill, start in a lower gear rather than downshifting to a lower gear from a higher gear once the ascent has started. This reduces strain on the engine and the possibility of stalling.

When descending a steep hill, avoid sudden braking. Shift to a lower gear when added engine braking is desired.

When speed control is on and you are driving uphill, your vehicle speed may drop considerably, especially if you are carrying a heavy load.

If vehicle speed drops more than 16 km/h (10 mph), the speed control will cancel automatically. Resume speed with accelerator pedal.

If speed control cancels after climbing the hill, reset speed by pressing and holding the SET ACCEL button (to resume speeds over 50 km/h [30 mph]).

Automatic transmissions may shift frequently while driving up steep grades. Eliminate frequent shifting by shifting out of D (Overdrive) into a lower gear.

Driving on snow and ice

A 4WD vehicle has advantages over 2WD vehicles in snow and ice but can skid like any other vehicle.

Avoid sudden applications of power and quick changes of direction on snow and ice. Apply the accelerator slowly and steadily when starting from a full stop.

If your vehicle is equipped with a Rear Anti-lock Brake System (RABS), you should be careful when braking. Front brake lock-up, on any surface, causes loss of steering control.

If your vehicle is equipped with a Four Wheel Anti-lock Brake System (ABS), apply the brakes as you normally would. In order to allow the ABS to operate properly, keep steady pressure on the brake pedal.

When driving on snow or ice with either braking system, allow more stopping distance and drive slower than usual. Consider using one of the lower gears.

VEHICLE LOADING

Before loading a vehicle, familiarize yourself with the following terms:

- **Base Curb Weight:** Weight of the vehicle including any standard equipment, fluids, lubricants, etc. It does not include occupants or aftermarket equipment.
- **Payload:** Combined maximum allowable weight of cargo, occupants and optional equipment. The payload equals the gross vehicle weight rating minus base curb weight.
- **GVW (Gross Vehicle Weight):** Base curb weight plus payload weight. The GVW is not a limit or a specification.
- **GVWR (Gross Vehicle Weight Rating):** Maximum permissable total weight of the base vehicle, occupants, optional equipment and cargo. The GVWR is specific to each vehicle and is listed on the Safety Certification Label on the driver's door pillar.
- **GAWR (Gross Axle Weight Rating):** Carrying capacity for each axle system. The GAWR is specific to each vehicle and is listed on the Safety Certification Label on the driver's door pillar.
- **GCW (Gross Combined Weight):** The combined weight of the towing vehicle (including occupants and cargo) and the loaded trailer.
- **GCWR (Gross Combined Weight Rating):** Maximum permissable combined weight of towing vehicle (including occupants and cargo) and the loaded trailer
- **Maximum Trailer Weight Rating:** Maximum weight of a trailer the vehicle is permitted to tow. The maximum trailer weight rating is determined by subtracting the vehicle curb weight for each engine/transmission combination, any required option weight for trailer towing and the weight of the driver from the GCWR for the towing vehicle.

- **Maximum Trailer Weight:** Maximum weight of a trailer the loaded vehicle (including occupants and cargo) is permitted to tow. It is determined by subtracting the weight of the loaded trailer towing vehicle from the GCWR for the towing vehicle.
- **Trailer Weight Range:** Specified weight range that the trailer must fall within that ranges from zero to the maximum trailer weight rating.

Remember to figure in the tongue load of your loaded trailer when figuring the total weight.

Do not exceed the GVWR or the GAWR specified on the certification label.

Do not use replacement tires with lower load carrying capacities than the originals because they may lower the vehicle's GVWR and GAWR limitations. Replacement tires with a higher limit than the originals do not increase the GVWR and GAWR limitations.

The Safety Certification Label, found on the driver's door pillar, lists several important vehicle weight rating limitations. Before adding any additional equipment, refer to these limitations. If you are adding weight to the front of your vehicle, (potentially including weight added to the cab), the weight added should not exceed the front axle reserve capacity (FARC). Additional frontal weight may be added to the front axle reserve capacity provided you limit your payload in other ways (i.e. restrict the number of occupants or amount of cargo carried).

Always ensure that the weight of occupants, cargo and equipment being carried is within the weight limitations that have been established for your vehicle including both gross vehicle weight and front and rear gross axle weight rating limits. Under no circumstance should these limitations be exceeded. Exceeding any vehicle weight rating limitation could result in serious damage to the vehicle and/or personal injury.

Special loading instructions for owners of pickup trucks and utility-type vehicles

For important information regarding safe operation of this type of vehicle, see the **Preparing to drive your vehicle** section inthe **Driving** chapter of this owner guide.

Loaded vehicles, with a higher center of gravity, may handle differently than unloaded vehicles. Extra precautions, such as slower speeds and increased stopping distance, should be taken when driving a heavily loaded vehicle.

Your vehicle has the capability to haul more cargo and people than most passenger cars. Depending upon the type and placement of the load, hauling cargo and people may raise the center of gravity of the vehicle.

Calculating the load your vehicle can carry/tow

1. Use the appropriate maximum gross combined weight rating (GCWR) chart to find the maximum GCWR for your type engine and rear axle ratio.

2. Weigh your vehicle as you customarily operate the vehicle without cargo. To obtain correct weights, try taking your vehicle to a shipping company or an inspection station for trucks.

3. Subtract your loaded vehicle weight from the maximum GCWR on the following charts. This is the maximum trailer weight your vehicle can tow and must fall below the maximum shown under maximum trailer weight on the chart.

DRIVING THROUGH WATER

Do not drive quickly through standing water, especially if the depth is unknown. Traction or brake capability may be limited and if the ignition system gets wet, your engine may stall. Water may also enter your engine's air intake and severely damage your engine.

If driving through deep or standing water is unavoidable, proceed very slowly. Never drive through water that is higher than the bottom of the hubs (for trucks) or the bottom of the wheel rims (for cars).

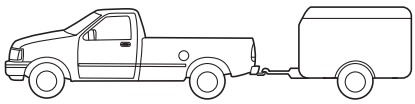
Once through the water, always try the brakes. Wet brakes do not stop the vehicle as effectively as dry brakes. Drying can be improved by moving your vehicle slowly while applying light pressure on the brake pedal.

Driving through deep water where the transmission vent tube is submerged may allow water into the transmission and cause internal transmission damage.

TRAILER TOWING

Your vehicle may tow a Conventional/Class IV trailer or fifth wheel trailer provided the maximum trailer weight is less than or equal to the maximum trailer weight listed for your engine and rear axle ratio on the following charts.

2nd unit bodies are not included in maximum trailer weight ratings. Weight of additional “body” must be subtracted from the maximum trailer weight.



Your vehicle’s load capacity is designated by weight, not by volume, so you cannot necessarily use all available space when loading a vehicle.

Towing a trailer places an additional load on your vehicle’s engine, transmission, axle, brakes, tires and suspension. Inspect these components carefully prior to and after any towing operation.

Do not exceed the GVWR or the GAWR specified on the certification label.

Towing trailers beyond the maximum recommended gross trailer weight could result in engine damage, transmission/axle damage, structural damage, loss of control, and personal injury.

F-250 w/manual transmission			
Engine	**Rear axle ratio**	**Maximum GCWR - kg (lbs.)**	**Maximum trailer weight - kg (lbs.)[1]**
5.4L	3.73	6 124 (13 500)	4 536 (10 000)
5.4L	4.10	6 804 (15 000)	4 536 (10 000)
6.8L	3.73	7 484 (16 500)	4 536 (10 000)
6.8L	4.30	8 165 (18 000)	4 536 (10 000)

[1]Conventional/Class IV trailer hitch only. Fifth wheel trailer maximum weights can be calculated by subtracting GVW from GCWR.

F-250 w/automatic transmission			
Engine	**Rear axle ratio**	**Maximum GCWR - kg (lbs.)**	**Maximum trailer weight - kg (lbs.)[1]**
5.4L	3.73	6 124 (13 500)	4 536 (10 000)
5.4L	4.10	6 804 (15 000)	4 536 (10 000)
6.8L	3.73	7 711 (17 000)	4 536 (10 000)
6.8L	4.30	8 165 (18 000)	4 536 (10 000)

[1]Conventional/Class IV trailer hitch only. Fifth wheel trailer maximum weights can be calculated by subtracting GVW from GCWR.

F-350 w/manual transmission			
Engine	**Rear axle ratio**	**Maximum GCWR - kg (lbs.)**	**Maximum trailer weight - kg (lbs.)[1]**
5.4L	3.73	6 124 (13 500)	4 536 (10 000)
5.4L	4.10	6 804 (15 000)	4 536 (10 000)
6.8L	3.73	7 484 (16 500)	4 536 (10 000)
6.8L	4.10	8 392 (18 500)	4 536 (10 000)
6.8L	4.30	9 072 (20 000)	4 536 (10 000)

[1]Conventional/Class IV trailer hitch only. Fifth wheel trailer maximum weights can be calculated by subtracting GVW from GCWR.

F-350 w/automatic transmission			
Engine	**Rear axle ratio**	**Maximum GCWR - kg (lbs.)**	**Maximum trailer weight - kg (lbs.)[1]**
5.4L	3.73	6 124 (13 500)	4 536 (10 000)
5.4L	4.10	6 804 (15 000)	4 536 (10 000)
6.8L	3.73	7 711 (17 000)	4 536 (10 000)
6.8L	4.30	9 072 (20 000)	4 536 (10 000)

[1]Conventional/Class IV trailer hitch only. Fifth wheel trailer maximum weights can be calculated by subtracting GVW from GCWR.

F-450 with manual transmission			
Engine	**Rear axle ratio**	**Maximum GCWR - kg (lbs.)**	**Maximum trailer weight - kg (lbs.)[1]**
6.8L	4.88	9 979 (22 000)	4 536 (10 000)
6.8L	5.38	9 979 (22 000)	4 536 (10 000)

[1]Conventional/Class IV trailer hitch only. Fifth wheel trailer maximum weights can be calculated by subtracting GVW from GCWR.

F-450 w/automatic transmission			
Engine	**Rear axle ratio**	**Maximum GCWR - kg (lbs.)**	**Maximum trailer weight - kg (lbs.)[1]**
6.8L	4.88	10 886 (24 000)	4 536 (10 000)
6.8L	5.38	11 794 (26 000)	4 536 (10 000)

[1]Conventional/Class IV trailer hitch only. Fifth wheel trailer maximum weights can be calculated by subtracting GVW from GCWR.

F-550			
Engine	**Rear axle ratio**	**Maximum GCWR - kg (lbs.)**	**Maximum trailer weight - kg (lbs.)[1]**
6.8L	4.88	10 886 (24 000)	4 536 (10 000)
6.8L	5.38	11 794 (26 000)	4 536 (10 000)

[1]Conventional/Class IV trailer hitch only. Fifth wheel trailer maximum weights can be calculated by subtracting GVW from GCWR.

Towing a Class IV trailer (extra heavy duty) 2 268–4 536 kg (5 001–10 000 lbs.) trailer weight requires a weight-distributing or fifth-wheel hitch. Trailers over 4 536 kg (10 000 lbs.) require a fifth-wheel hitch.

Preparing to tow

Use the proper equipment for towing a trailer, and make sure it is properly attached to your vehicle. See your dealer or a reliable trailer dealer if you require assistance.

Hitches

Do not use hitches that clamp onto the vehicle's bumper or attach to the axle. You must distribute the load in your trailer so that 10%–15% of the total weight of the trailer is on the tongue.

Load equalizing hitch

When hooking up a trailer using a load equalizing hitch, always use the following procedure:

1. Park the unloaded vehicle on a level surface. With the ignition on and all doors closed, allow the vehicle to stand for several minutes so that it can level.

2. Measure the height of a reference point on the front and rear bumpers at the center of the vehicle.

3. Attach the trailer to the vehicle and adjust the hitch equalizers so that the front bumper height is within 0–13 mm (0.5 in) of the reference point. After proper adjustment, the rear bumper should be no higher than in Step 2.

Adjusting an equalizing hitch so the rear bumper of the vehicle is higher than it was unloaded will defeat the function of the load equalizing hitch and may cause unpredictable handling.

Safety chains

Always connect the trailer's safety chains to the frame or hook retainers of the vehicle hitch. To connect the trailer's safety chains, cross the chains under the trailer tongue and allow slack for turning corners.

If you use a rental trailer, follow the instructions that the rental agency gives to you.

Do not attach safety chains to the bumper.

Trailer brakes

Electric brakes and manual, automatic or surge-type trailer brakes are safe if installed properly and adjusted to the manufacturer's specifications. The trailer brakes must meet local and Federal regulations.

Do not connect a trailer's hydraulic brake system directly to your vehicle's brake system. Your vehicle may not have enough braking power and your chances of having a collision greatly increase.

The braking system of the tow vehicle is rated for operation at the GVWR not GCWR.

Trailer lamps

Trailer lamps are required on most towed vehicles. Make sure your trailer lamps conform to local and Federal regulations. See your dealer or trailer rental agency for proper instructions and equipment for hooking up trailer lamps.

Using a step bumper (if equipped)

The rear bumper is equipped with an integral hitch and only requires a ball with a 25.4 mm (one inch) shank diameter. The bumper has a 2 270 kg (5 000 lb.) trailer weight and 227 kg (500 lb.) tongue weight capacity.

If it is necessary to relocate the trailer hitch ball position, a frame-mounted trailer hitch must be installed.

Driving while you tow

When towing a trailer:

- Ensure that you turn off your speed control. The speed control may shut off automatically when you are towing on long, steep grades.
- Consult your local motor vehicle speed regulations for towing a trailer.
- Use a lower gear when towing up or down steep hills. This will eliminate excessive downshifting and upshifting for optimum fuel economy and transmission cooling.
- Anticipate stops and brake gradually.

Exceeding the GCWR rating may cause internal transmission damage and void your warranty coverage.

Servicing after towing

If you tow a trailer for long distances, your vehicle will require more frequent service intervals. Refer to your scheduled maintenance guide for more information.

Trailer towing tips

- Practice turning, stopping and backing up before starting on a trip to get the feel of the vehicle trailer combination. When turning, make wider turns so the trailer wheels will clear curbs and other obstacles.
- Allow more distance for stopping with a trailer attached.
- The trailer tongue weight should be no more than 10–15% of the loaded trailer weight.
- After you have traveled 80 km (50 miles), thoroughly check your hitch, electrical connections and trailer wheel lug nuts.
- When stopped in traffic for long periods of time in hot weather, place the gearshift in P (Park) (automatic transmissions) or N (Neutral) (manual transmissions). This aids engine cooling and air conditioner efficiency.
- Vehicles with trailers should not be parked on a grade. If you must park on a grade, place wheel chocks under the trailer's wheels.

Launching or retrieving a boat

When backing down a ramp during boat launching or retrieval,

- Do not allow the static water level to rise above the bottom edge of the rear bumper and
- Do not allow waves to break higher than 15 cm (6 inches) above the bottom edge of the rear bumper.
- Disconnect the trailer tow electrical connector to prevent blown fuses caused by water entering into your trailer's electrical wiring.

Exceeding these limits may allow water to enter critical vehicle components, adversely affecting driveability, emissions and reliability.

Replace front and rear axle lubricants any time the axles have been submerged in water. Axle lubricant quantities are not to be checked unless a leak is suspected.

All Rear Wheel Drive (RWD) vehicles

This applies to all cars and 4x2 trucks/sport utilities with rear wheel drive capability.

An example of recreational towing is towing your vehicle behind a motorhome. The following recreational towing guidelines are designed to ensure that your transmission is not damaged.

- Place the transmission in N (Neutral).
- Maximum speed is 56 km/h (35 mph).
- Maximum distance is 80 km (50 miles).

If a distance of 80 km (50 miles) or a speed of 56 km/h (35 mph) must be exceeded, you must disconnect the driveshaft. Ford recommends the driveshaft be removed/installed only by a qualified technician. See your local dealer for driveshaft removal/installation.

Improper removal/installation of the driveshaft can cause transmission fluid loss, damage to the driveshaft and internal transmission components.

RWD vehicles with 4x4 electronic shift transfer case or All Wheel Drive (AWD) vehicles with automatic transmissions

Regarding recreational towing or having your vehicle towed, 4x4 vehicles with electronic shift on the fly and AWD vehicles cannot be towed with any wheels on the ground (with the exception of moving it as a disabled vehicle off the road out of traffic).

SNOWPLOWING

For low speed snow removal, Ford offers a Snowplow Package as an option. If you do not have this equipment, do not use your vehicle as a snowplow or powertrain and suspension system damage may occur.

Do not install a snowplow and plow with your vehicle until it has been driven at least 800 km (500 miles).

Installing the snowplow

Removing the blocker beam without installing snowplow attachment hardware may affect air bag deployment in a crash. Do not operate the truck unless either the blocker beam or snowplow attachment hardware is installed on the vehicle.

Read the following instructions before installing a snowplow:

- Front GAWR must not exceed 63% of the GVW. Add ballast weight to the back of the vehicle, if necessary. Refer to the Safety Compliance Certification Label to find Front GAWR.

- The Front Axle Accessory Reserve Capacity and the Total Accessory Reserve Capacity listed on the bottom right of the Safety Compliance Certification Label will determine whether or not the addition of a snowplow will overload your vehicle.
- The weight of the snowplow and supporting components distributed to the front axle must not exceed the front accessory reserve capacity.
- The total weight of the snowplow and aftermarket equipment must not exceed the Total Accessory Reserve Capacity.
- The weight of the installed snowplow and aftermarket equipment must not load the vehicle beyond the GAWR (front/rear) and GVWR listed on the Safety Compliance Certification Label.
- The total weight of the snowplow and aftermarket equipment must be considered part of the payload and must not exceed the Gross Combined Weight Rating (GCWR) for towing.
- Federal and most local regulations require additional exterior lamps for snowplow-equipped vehicles. Consult your dealer for additional information.
- After installing a snowplow to the vehicle, ensure the vehicle's front toe alignment and front ride height are within specification (reset if required). These specifications are located in the vehicle's Workshop Manual. Adherence to the toe, tire pressures and ride height specification is important for proper tire wear, ride, handling and headlight aim. Also, maintain the engine oil and transmission fluid change intervals following the severe duty schedule.

Do not exceed the GVWR or the GAWR specified on the certification label.

Removing snowplow

Read the following instructions before removing a snowplow:

- After removing a snowplow from the vehicle, ensure the vehicle's front toe alignment and front ride height are within specification (reset if required). These specifications are located in the vehicle's Workshop Manual. Adherence to the toe and ride height specification is important for proper tire wear, ride, handling and headlight aim.

Snowplowing with your air bag equipped vehicle

Your vehicle is equipped with driver and passenger air bag Supplemental Restraint System (SRS). The SRS is designed to activate when the vehicle sustains sufficient longitudinal deceleration.

Careless or high speed driving while plowing snow which results in sufficient vehicle decelerations can deploy the air bag. Such driving also increases the risk of accidents.

All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag SRS is provided.

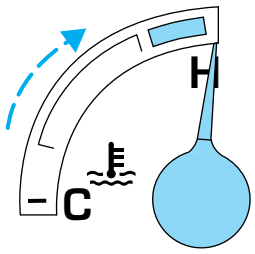
Never remove or defeat the “tripping mechanisms” designed into the snow removal equipment by its manufacturer. Doing so may cause damage to the vehicle and the snow removal equipment as well as possible air bag deployment.

Additional equipment such as snowplow equipment may effect the performance of the air bag sensors increasing the risk of injury. Please refer to the Body Builders Layout Book for instructions about the appropriate installation of additional equipment.

Do not attempt to service, repair, or modify the Air Bag Supplemental Restraint System or its fuses. See your Ford or Lincoln Mercury dealer.

Engine temperature while plowing

When driving with a plow, your engine may run at a higher temperature than normal because the attached snowplow blade will restrict airflow to the radiator.



If you are driving more than 24 km (15 miles) at temperatures above freezing, angle the plow blade either full left or full right to provide maximum airflow to the radiator.

If you are driving less than 24 km (15 miles) at speeds up to 64 km/h (40 mph) in cold weather, you will not need to worry about blade position to provide maximum airflow.

4WD operation while plowing

- Shift transfer case to 4x4 LOW (4WD Low) when plowing in small areas at speeds below 8 km/h (5 mph).
- Shift transfer case to 4x4 HIGH (4WD High) when plowing larger areas or light snow at higher speeds. Do not exceed 24 km/h (15 mph).
- Do not shift the transmission from a forward gear to R (Reverse) until the engine is at idle and the wheels are stopped.
- If the vehicle is stuck, shift the transmission in a steady motion between forward and reverse gears. Do not rock the vehicle for more than a few minutes. The transmission and tires may be damaged or the engine can overheat.

It is the owner's responsibility to avoid engine overheating which can cause damage.

Do not spin the wheels at over 35 mph (55 km/h). The tires may fail and injure a passenger or bystander.

GETTING ROADSIDE ASSISTANCE

To fully assist you should you have a vehicle concern, Ford offers a complimentary roadside assistance program. This program is separate from the New Vehicle Limited Warranty. The service is available:

- 24–hours, seven days a week
- for the Basic warranty period (Canada) or New Vehicle Limited Warranty period (U.S.) of three years or 60 000 km (36 000 miles), whichever comes first on Ford and Mercury vehicles, and four years or 80 000 km (50 000 miles) on Lincoln vehicles

Roadside assistance will cover:

- changing a flat tire
- jump-starts
- lock-out assistance
- fuel delivery
- towing of your disabled vehicle up to 56.3 kms (35 miles) from the point of pickup (this can include to the nearest Ford dealership, or your selling dealer if within the specified distance.) One tow per disablement. Even non-warranty related tows, like accidents or getting stuck in the mud or snow, are covered (some exclusions apply, such as impound towing or repossession).

Using roadside assistance

Complete the roadside assistance identification card and place it in your wallet for quick reference. In the United States, this card is found in the Owner Guide portfolio in the glove compartment in Ford vehicles and is mailed to you if you own a Mercury or Lincoln. In Canada, the card is found in the Roadside Assistance book in the glove compartment.

To receive roadside assistance in the United States for Ford or Mercury vehicles, call 1–800–241–3673 or if you own a Lincoln vehicle, call 1–800–521–4140. In Canada call 1–800–665–2006.

Should you need to arrange roadside assistance for yourself, Ford will reimburse a reasonable amount. To obtain information about reimbursement, call 1–800–241–3673 in the United States for Ford or Mercury vehicles; or if you own a Lincoln vehicle, call 1–800–521–4140. Call 1–800–665–2006 in Canada.

Roadside coverage beyond basic warranty

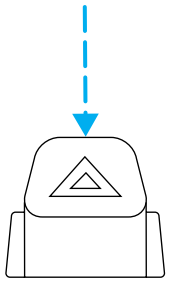
In the United States, you may purchase additional roadside assistance coverage beyond this period through the Ford Auto Club by contacting your Ford or Lincoln Mercury dealer.

Similarly in Canada, for uninterrupted Roadside Assistance coverage, you may purchase extended coverage prior to your Basic Warranty's Roadside Assistance expiring. For more information and enrollment, contact 1–877–294–2582 or visit our website at www.ford.ca.

HAZARD FLASHER

Use only in an emergency to warn traffic of vehicle breakdown, approaching danger, etc. The hazard flashers can be operated when the ignition is off.

- The hazard lights control is located on top of the steering column.
- Depress hazard lights control to activate all hazard flashers simultaneously.
- Depress control again to turn the flashers off.

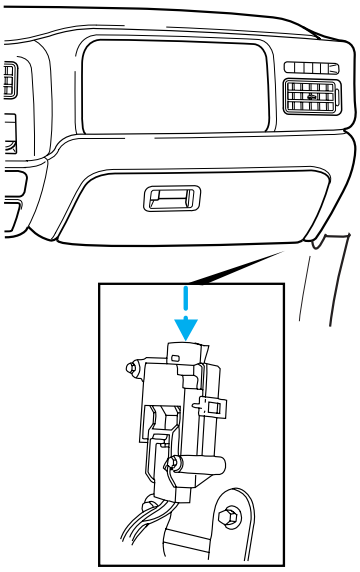


RESETTING THE FUEL PUMP SHUT-OFF SWITCH FUEL RESET

The fuel pump shut-off switch is a device intended to stop the electric fuel pump when your vehicle has been involved in a substantial jolt.

After a collision, if the engine cranks but does not start, the fuel pump shut-off switch may have been activated.

The fuel pump shut-off switch is located in the passenger's foot well, by the kick panel.



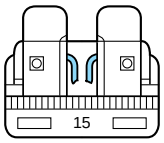
Use the following procedure to reset the fuel pump shut-off switch.

1. Turn the ignition to the OFF position.
2. Check the fuel system for leaks.
3. If no fuel leak is apparent, reset the fuel pump shut-off switch by pushing in on the reset button.
4. Turn the ignition to the ON position. Pause for a few seconds and return the key to the OFF position.
5. Make a further check for leaks in the fuel system.

FUSES AND RELAYS

Fuses

If electrical components in the vehicle are not working, a fuse may have blown. Blown fuses are identified by a broken wire within the fuse. Check the appropriate fuses before replacing any electrical components.



NOTE: Always replace a fuse with one that has the specified amperage rating. Using a fuse with a higher amperage rating can cause severe wire damage and could start a fire.

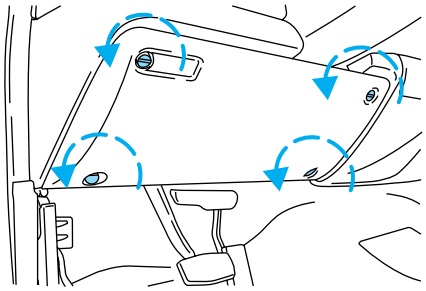
Standard fuse amperage rating and color

COLOR					
Fuse rating	**Mini fuses**	**Standard fuses**	**Maxi fuses**	**Cartridge maxi fuses**	**Fuse link cartridge**
2A	Grey	Grey	—	—	—
3A	Violet	Violet	—	—	—
4A	Pink	Pink	—	—	—
5A	Tan	Tan	—	—	—
7.5A	Brown	Brown	—	—	—
10A	Red	Red	—	—	—
15A	Blue	Blue	—	—	—
20A	Yellow	Yellow	Yellow	Blue	Blue
25A	Natural	Natural	—	—	—
30A	Green	Green	Green	Pink	Pink
40A	—	—	Orange	Green	Green
50A	—	—	Red	Red	Red
60A	—	—	Blue	—	Yellow
70A	—	—	Tan	—	Brown
80A	—	—	Natural	—	Black

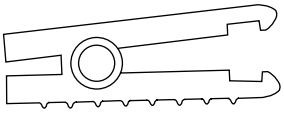
Passenger compartment fuse panel

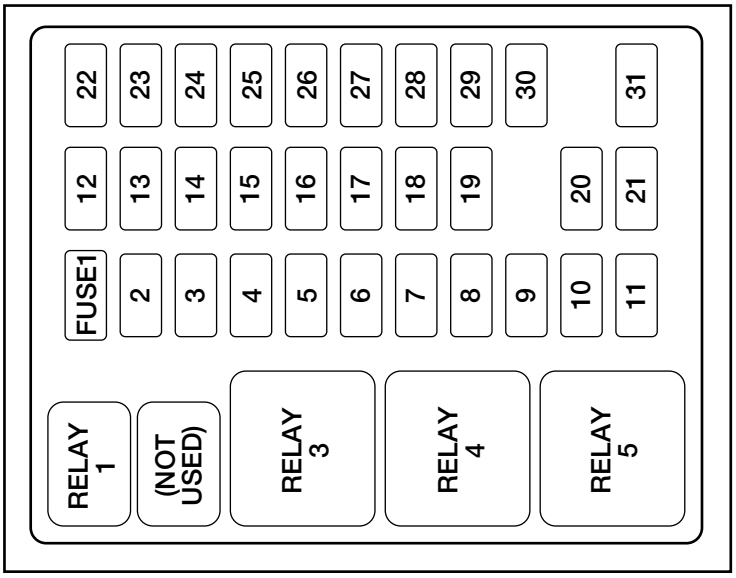
The fuse panel is located below and to the left of the steering wheel by the brake pedal. Remove the panel cover to access the fuses.

To remove the fuse panel cover, turn the panel fasteners counterclockwise.



To remove a fuse use the fuse puller tool provided on the fuse panel cover.





The fuses are coded as follows.

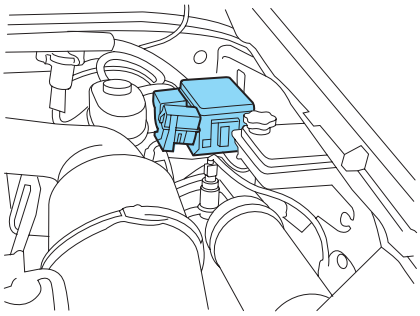
Fuse/Relay Location	Fuse Amp Rating	Passenger Compartment Fuse Panel Description
1	20A	Turn/Hazard Lamps
2	—	Not Used
3	20A	Cigar Lighter, Data Link Connector
4	10A	Glove Box Lamp, Map Lamps, Power Mirrors, Underhood Lamp
5	—	Not Used
6	—	Not Used
7	5A	Power Window/Lock Switch Illumination
8	5A	Radio, Headlamp Switch Illumination
9	—	Not Used
10	15A	Dual Fuel Tanks

Fuse/Relay Location	Fuse Amp Rating	Passenger Compartment Fuse Panel Description
11	30A	Wiper Motor, Wiper Run/Park Relay Coil, Wiper Hi/LO Relay Coil, Washer Pump Relay Coil
12	15A	Horn
13	20A	Stop Lamps, Center High-mount Stop Lamp, Trailer Tow Stop Lamp, Speed Control
14	10A	Dome Lamp, Cargo Lamp, Courtesy Lamps, Running Board Lamps
15	5A	Stop Lamp Switch (Logic): Generic Electronic Module (GEM), Powertrain Control Module (PCM), Four Wheel Anti-lock Brake System (4WABS) Module, Brake Shift Interlock, Cluster and PCM Keep Alive Memory
16	15A	Instrument Cluster, Hi-beam Headlamps
17	—	Not Used
18	5A	Audio
19	10A	Auxiliary Powertrain Control Module (APCM) (Diesel only), Instrument Cluster, GEM Module, Overdrive Cancel Switch, Idle Validation Switch (Diesel only), Overhead Console, Diesel PCM via Clutch
20	15A	Starter Motor Relay Coil, Clutch Switch
21	—	Not Used
22	10A	Passenger Air Bag Activation/Deactivation Switch, Blower Motor Relay Coil
23	10A	Air Bag Module
24	10A	A/C Clutch, Blend Door Actuator, Trailer Tow Battery Charge Relay Coil, Four Wheel Anti-Lock Brake System (4WABS), Turn Signal
25	—	Not Used

Fuse/Relay Location	Fuse Amp Rating	Passenger Compartment Fuse Panel Description
26	—	Not Used
27	10A	Ignition Run Power Feed (Customer Access)
28	15A	Brake Shift Interlock, DRL Relay Coil, Speed Control Module, Backup Lamps, Trailer Tow Backup Lamp Relay Coil, Electronic Shift On The Fly Hub Lock Solenoid, Vacuum Pump Motor
29	5A	Instrument Cluster (Charge and Airbag Warning Lamps)
30	30A	PCM Relay Coil, Ignition Coil (Gasoline only), Fuel Heater (Diesel only), Wastegate Solenoid (Diesel only), Injector Driver Module Relay Coil (Diesel only)
31	5A	Fog Lamp Switch
Relay 1	—	Interior Lamp Relay
Relay 2	—	Not Used
Relay 3	—	Horn
Relay 4	—	Power Window One Touch Down Relay
Relay 5	—	Accessory Delay Relay

Power distribution box

The power distribution box, trailer tow and electronic shift on the fly relay blocks are located in the engine compartment near the brake master cylinder.

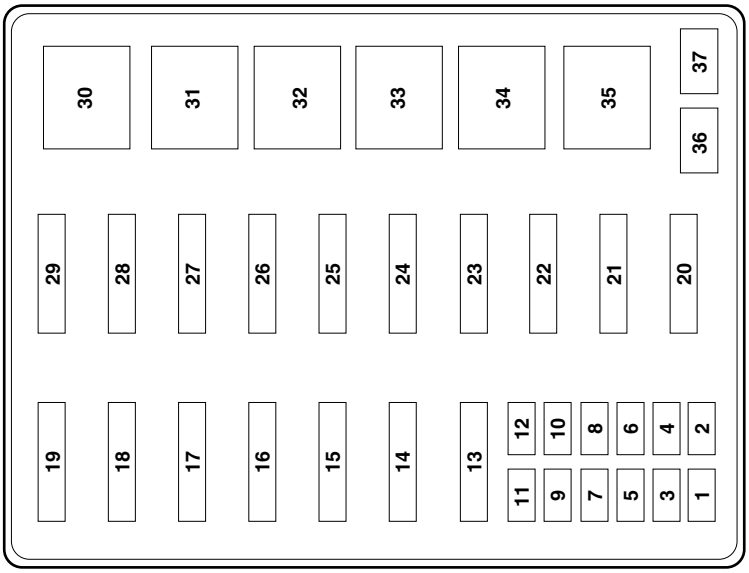


The power distribution box contains high-current fuses that protect your vehicle's main electrical systems from overloads.

Always disconnect the battery before servicing high current fuses.

Always replace the cover to the Power Distribution Box before reconnecting the battery or refilling fluid reservoirs.

If the battery has been disconnected and reconnected, refer to the *Battery* section of the *Maintenance and care* chapter.



The high-current fuses and relays are coded as follows.

Fuse/Relay Location	Fuse Amp Rating	Power Distribution Box Description
1	7.5A *	Trailer Tow Left Stop/Turn Lamp
2	10A*	Washer Pump
3	7.5A*	Trailer Tow Right Stop/Turn Lamp
4	20A*	Trailer Tow Backup Lamps, Trailer Tow Park Lamps
5	20A* (Gasoline only) 5A* (Diesel only)	Gasoline only-PCM, Fuel Pump Relay Coil, Mass Air Flow Sensor, Fuel Injectors Diesel only-Dual Alternator ″A″ Field
6	10A*	Gasoline only-A/C (CASS) Diesel only-Single or Dual Alternator ″A″ Field, Regulator

Fuse/Relay Location	Fuse Amp Rating	Power Distribution Box Description
7	20A* (Gasoline only) 5A* (Diesel only)	Gasoline only-Vapor Management Valve, HEGO Sensors, Intake Manifold Communication Control, EVR Solenoid, PCM, Canister Vent Solenoid Diesel only-Dual Alternator ″A″ Field
8	15A*	Trailer Tow Electronic Brake Illumination, Park Lamps, Trailer Tow Park Lamp Relay Coil
9	10A*	Left Headlamp (Low Beam)
10	20A*	Power Point
11	10A*	Right Headlamp (Low Beam)
12	15A*	Daytime Running Lamps (DRL) Resistor, Fog Lamps
13	30A**	Multi-function Switch, Headlamps
14	60A**	Anti-Lock Brake System
15	30A**	Heated Seats
16	30A**	Trailer Tow Battery Charge
17	30A**	Electronic Shift On The Fly Relay, Transfer Case Shift Motor
18	30A**	Power Seat, Adjustable Pedals
19	20A**	Fuel Pump Motor, PCM
20	50A**	Ignition Switch (B4 & B5)
21	50A**	Ignition Switch (B1 & B3)
22	50A**	Junction Box Battery Feed
23	40A**	Blower Motor
24	30A** (Gasoline only) 20A** (Diesel only)	PCM Power
25	30A***	Power Windows

Fuse/Relay Location	Fuse Amp Rating	Power Distribution Box Description
26	20A**	If equipped with Remote Keyless Entry-Driver Door Unlock Relay Coil, All Door Unlock Relay Coil, All Door Lock Relay Coil, Park Lamp Flash Relay, If not equipped with Remote Keyless Entry-Power Door Lock Motors
27	- (Gasoline only) 30A** (Diesel only)	Gasoline only-Not Used Diesel only-Injector Driver Module
28	30A**	Trailer Tow Electronic Brake Controller
29	20A**	Radio
30	--	PCM Power Relay
31	--	Blower Motor Relay
32	--	A/C CASS (Gasoline only), Injector Driver Module Power Relay (Diesel only)
33	--	Washer Pump Relay
34	--	Windshield Wiper Park/Run Relay
35	--	Windshield Wiper HI/LO Relay
36	--	A/C Clutch Diode
37	--	PCM Diode
38	--	Trailer Tow Backup Lamp Relay
39	--	Trailer Tow Battery Charge Relay
40	--	Electronic Shift On The Fly Relay #1
41	—	Electronic Shift On The Fly Relay #2
* Mini Fuses ** Maxi Fuses ***Circuit Breaker		

CHANGING THE TIRES

If you get a flat tire while driving, do not apply the brake heavily. Instead, gradually decrease your speed. Hold the steering wheel firmly and slowly move to a safe place on the side of the road.

Spare tire information

Your vehicle may be equipped with a spare tire that can be used as either a spare or a regular tire. The spare tire is not equipped with wheel trim. The wheel trim from the original wheel/tire may be used on the spare.

If your vehicle is equipped with 4WD, a spare tire of a different size than the road tires should not be used. Such a tire could result in damage to driveline components and make the vehicle difficult to control.

Location of the spare tire and tools

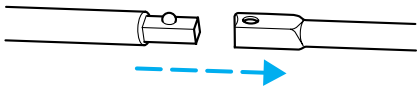
The spare tire and tools for your vehicle are stowed in the following locations:

Tool	Location
Spare tire (pick-up trucks only)	Under the vehicle, just forward of the rear bumper
Jack	Regular cab, crew cab and SuperCab without rear bench seat: Fastened to floor pan behind rearmost seat on passenger side
	SuperCab with rear bench seat: Under rear bench on passenger side
Jack handle and lug wrench	On top of the radiator support at the front of the engine compartment
Key, spare tire lock (if equipped)	In the glove box

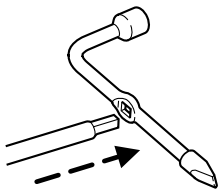
Removing the spare tire (with spare tire carrier only)

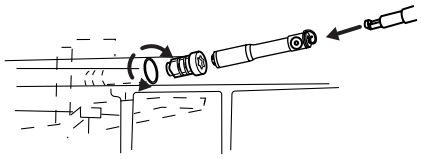
1. The following tools are required to remove the spare tire:

- one handle extension and one typical extension. To assemble, align button with hole and slide parts together. To disconnect, depress button and pull apart.



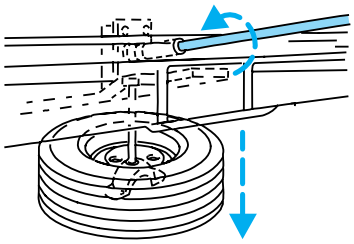
- one wheel nut wrench. Slide over square end of jack handle.





2. If equipped, unlock and remove the spare tire lock from the rear bumper drive tube using the the spare tire lock key and the jack handle.

3. Insert the hooked end of the jack handle into the rear bumper drive tube.



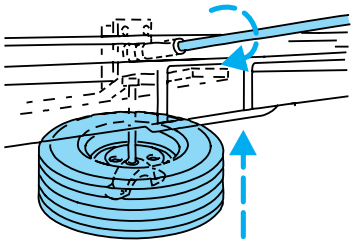
The handle will stop moving and you will feel forward resistance to turning when properly engaged.

4. Turn the handle counterclockwise and lower the spare until you can slide the tire rearward and the cable is slack.

5. Remove the retainer through the center of the wheel.

Stowing the spare tire

1. Lay the tire on the ground with the valve stem facing up.



2. Slide the wheel under the vehicle and install the retainer through the wheel center.

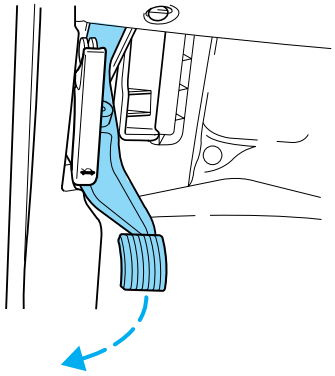
3. Turn the jack handle clockwise until the tire is raised to its original position underneath the vehicle. The effort to turn the jack handle increases significantly and the spare tire carrier ratchets when the tire is raised to the stowed position. The spare tire carrier has a built-in ratchet feature that will not allow you to overtighten.

4. Check that the tire lies flat to the frame assembly. Push against the tire to make sure it is tightly seated under the vehicle. Loosen or retighten if necessary.

5. If removed, install the spare tire lock into the bumper drive tube with the spare tire lock key and jack handle.

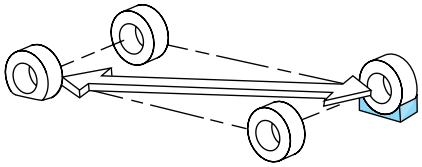
Tire change procedure

1. Park on a level surface, activate hazard flashers and set the parking brake.



- Automatic transmission: Place gearshift lever in P (Park).
- Manual transmission: Place gearshift lever in R (Reverse).
- Electronic Shift On the Fly four wheel drive: Place transfer case in 2WD, 4x4 HIGH or 4x4 LOW.
- Manual shift transfer case four wheel drive: Place transfer case in 2H, 4H or 4L.

To prevent the vehicle from moving when you change a tire, be sure the parking brake is set, then block (in both directions) the wheel that is diagonally opposite (other side and end of the vehicle) to the tire being changed.

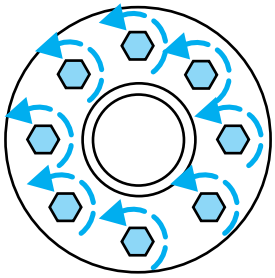


2. Turn engine OFF and block the diagonally opposite wheel (block not provided).

3. Remove the jack, jack handle, lug wrench and spare tire from the stowage locations.

4. Use the tip of the lug wrench to remove any wheel trim.

5. Loosen each wheel lug nut one-half turn counterclockwise but do not remove them until the wheel is raised off the ground.

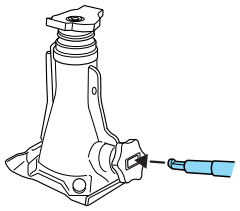


When one of the rear wheels is off the ground, the transmission alone will not prevent the vehicle from moving or slipping off the jack, even if the transmission is in P (Park) (automatic transmission) or R (Reverse) (manual transmission). To prevent the vehicle from moving when you change the tire, be sure that the parking brake is set and the diagonally opposite wheel is blocked.

If the vehicle slips off the jack, you or someone else could be seriously injured.

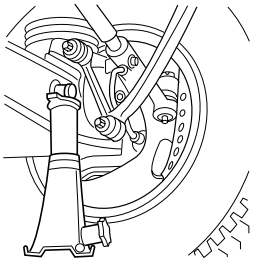
The following steps apply to F250/F350 only:

6. Insert the hooked end of the jack handle into the jack and use the handle to slide the jack under the vehicle.

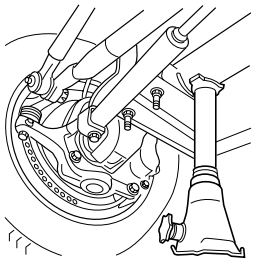


7. Position the jack according to the following guides:

- Front (4x2)

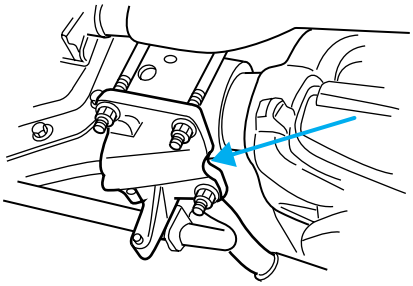


- Front passenger side (4x4)

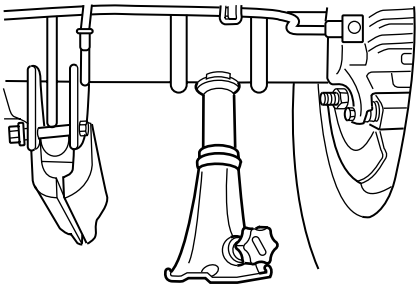


- Front driver side (4x4)

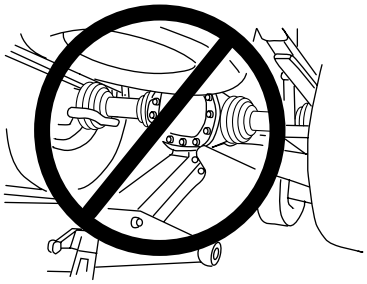
Make sure the jack fits into the notched area next to the differential housing.



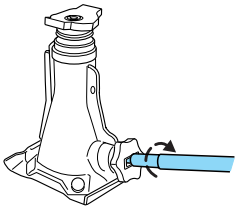
- Rear



Never use the front or rear differential as a jacking point.



To lessen the risk of personal injury, do not put any part of your body under the vehicle while changing a tire. Do not start the engine when your vehicle is on the jack. The jack is only meant for changing the tire.



8. Turn the jack handle clockwise until the wheel is completely off the ground and high enough to install the spare tire.

9. Remove the lug nuts with the lug wrench.

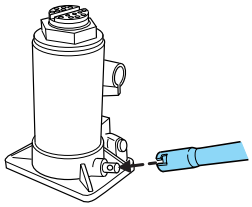
10. On single rear wheel vehicles, replace the flat tire with the spare tire, making sure the valve stem is facing outward for all front tires and vehicles equipped with single rear wheels. If replacing an inboard rear tire on a dual rear wheel vehicle, the valve stem must be facing outward. If replacing the outboard wheel, the valve stem must be facing inward. Reinstall the lug nuts until the wheel is snug against the hub. Do not fully tighten the lug nuts until the wheel has been lowered.

11. Lower the wheel by turning the jack handle counterclockwise.

Go to step 19.

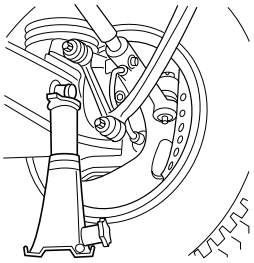
The following steps apply to F350 chassis Cab F450/F550 only:

12. Slide the notched end of the jack handle over the release valve and use the handle to slide the jack under the vehicle. Make sure the valve is closed by turning it clockwise.

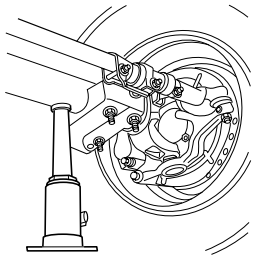


13. Position the jack according to the following guides:

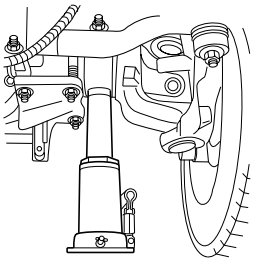
- Front (4x2) F350



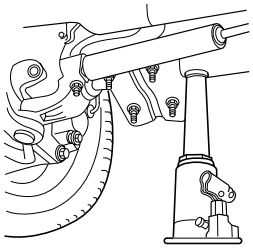
- Front (4x2) F450/550



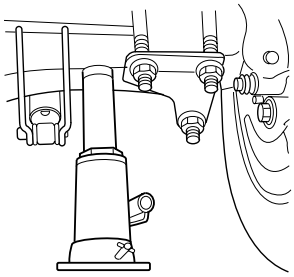
- Front driver side (4x4)



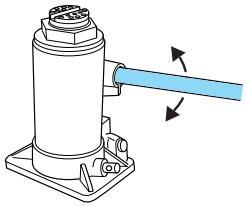
- Front passenger side (4x4)



- Rear



14. Insert the jack handle into the pump linkage.



15. Use an up-and-down motion with the jack handle to raise the wheel completely off the ground.

Hydraulic jacks are equipped with a pressure release valve that prevents lifting loads which exceed the jack's rated capacity.

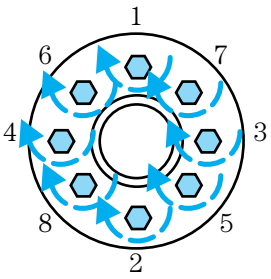
16. Remove the lug nuts with the lug wrench.

17. Replace the flat tire with the spare tire, making sure the valve stem is facing outward on all front an inboard rear wheels. If replacing the outboard wheel, the valve stem must be facing inward. Reinstall the lug nuts until the wheel is snug against the hub. Do not fully tighten the lug nuts until the wheel has been lowered.

18. Lower the wheel by slowly turning the release valve counterclockwise.

Opening the release valve slowly will provide a more controlled rate of descent.

The following steps apply to all vehicles:



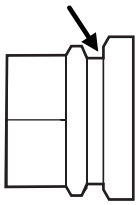
19. Remove the jack and fully tighten the lug nuts in the order shown.
20. Stow the flat tire. Refer to *Stowing the spare tire* if the vehicle is equipped with a spare tire carrier.
21. Stow the jack, jack handle and lug wrench. Make sure the jack is securely fastened so it does not rattle when driving.
22. Unblock the wheels.

On vehicles equipped with single rear wheels, retighten the lug nuts to the specified torque at 800 km (500 miles) after any wheel disturbance (tire rotation, changing a flat tire, wheel removal, etc.).

On vehicles equipped with dual rear wheels, retighten the wheel lug nuts to the specified torque at 160 km (100 miles), and again at 800 km (500 miles) of new vehicle operation and after any wheel disturbance (tire rotation, changing a flat tire, wheel removal, etc.).

Bolt size	Wheel lug nut torque*	
	Nm	Lb-ft
M14 x 1.5	200-225	150-165
* Torque specifications are for nut and bolt threads free of dirt and rust. Use only Ford recommended replacement fasteners.		

On all two-piece flat wheel nuts, apply one drop of motor oil between the flat washer and the nut. Do not apply motor oil to the wheel nut threads or the wheel stud threads.



When a wheel is installed, always remove any corrosion, dirt or foreign materials present on the mounting surfaces of the wheel or the surface of the front disc brake hub and rotor that contacts the wheel. Installing wheels without correct metal-to-metal contact at the wheel mounting surfaces can cause the wheel nuts to loosen and the wheel to come off while the vehicle is in motion, resulting in loss of control.

JUMP STARTING YOUR VEHICLE

The gases around the battery can explode if exposed to flames, sparks, or lit cigarettes. An explosion could result in injury or vehicle damage.

Batteries contain sulfuric acid which can burn skin, eyes, and clothing, if contacted.

Do not attempt to push-start your vehicle. Automatic transmissions do not have push-start capability; also, the catalytic conveter may become damaged.

Preparing your vehicle

When the battery is disconnected or a new battery is installed, the transmission must relearn its adaptive strategy. As a result of this, the transmission may shift firmly. This operation is considered normal and will not affect function or durability of the transmission. Over time, the adaptive learning process will fully update transmission operation to its optimum shift feel.

1. **Use only a 12–volt supply to start your vehicle.**

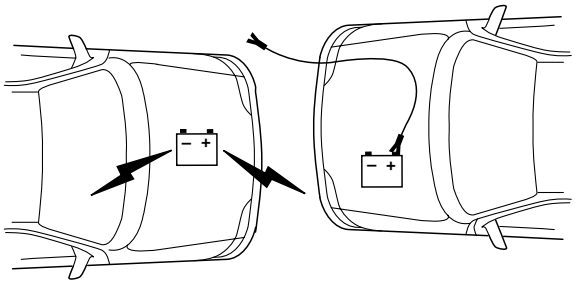
2. Do not disconnect the battery of the disabled vehicle as this could damage the vehicle's electrical system.

3. Park the booster vehicle close to the hood of the disabled vehicle making sure the two vehicles **do not** touch. Set the parking brake on both vehicles and stay clear of the engine cooling fan and other moving parts.

4. Check all battery terminals and remove any excessive corrosion before you attach the battery cables. Ensure that vent caps are tight and level.

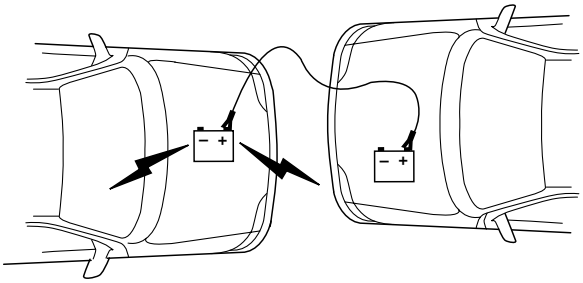
5. Turn the heater fan on in both vehicles to protect any electrical surges. Turn all other accessories off.

Connecting the jumper cables

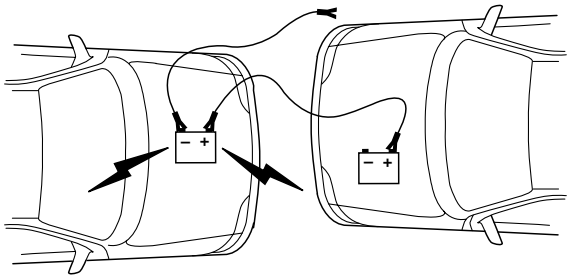


1. Connect the positive (+) booster cable to the positive (+) terminal of the discharged battery.

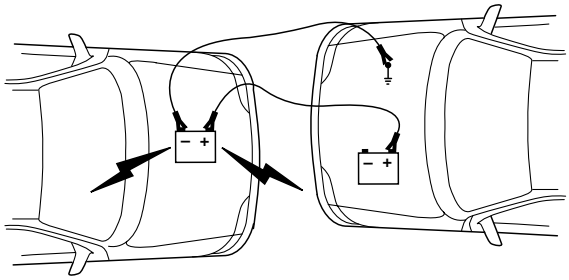
Note: In the illustrations, *lightning bolts* are used to designate the assisting (boosting) battery.



2. Connect the other end of the positive (+) cable to the positive (+) terminal of the assisting battery.



3. Connect the negative (-) cable to the negative (-) terminal of the assisting battery.



4. Make the final connection of the negative (-) cable to an exposed metal part of the stalled vehicle's engine, away from the battery and the carburetor/fuel injection system. **Do not** use fuel lines, engine rocker covers or the intake manifold as *grounding* points.

Do not connect the end of the second cable to the negative (-) terminal of the battery to be jumped. A spark may cause an explosion of the gases that surround the battery.

5. Ensure that the cables are clear of fan blades, belts, moving parts of both engines, or any fuel delivery system parts.

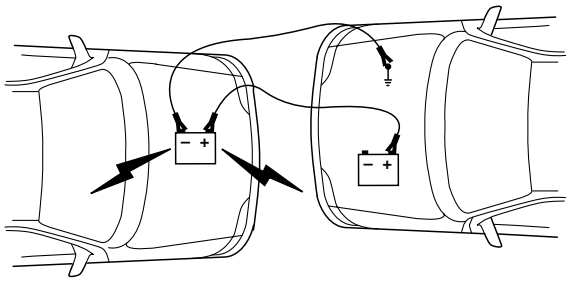
Jump starting

1. Start the engine of the booster vehicle and run the engine at moderately increased speed.

2. Start the engine of the disabled vehicle.

3. Once the disabled vehicle has been started, run both engines for an additional three minutes before disconnecting the jumper cables.

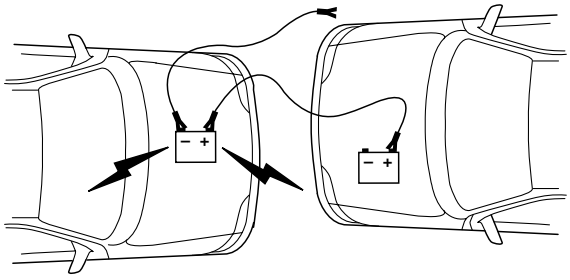
Removing the jumper cables



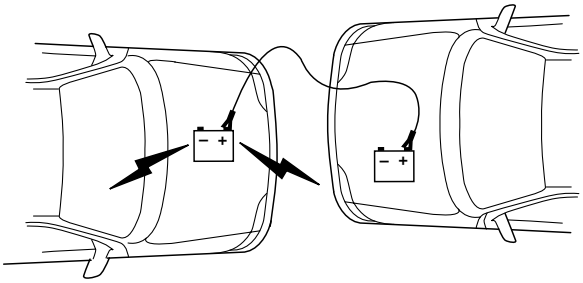
Remove the jumper cables in the reverse order that they were connected.

1. Remove the jumper cable from the *ground* metal surface.

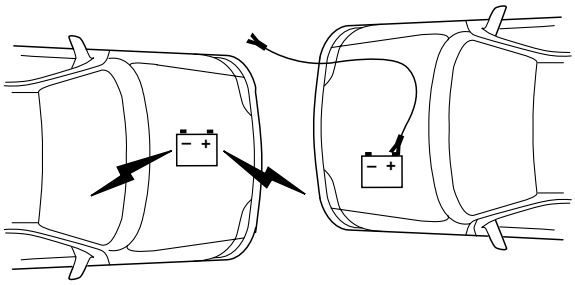
Note: In the illustrations, *lightning bolts* are used to designate the assisting (boosting) battery.



2. Remove the jumper cable on the negative (-) connection of the booster vehicle's battery.



3. Remove the jumper cable from the positive (+) terminal of the booster vehicle's battery.

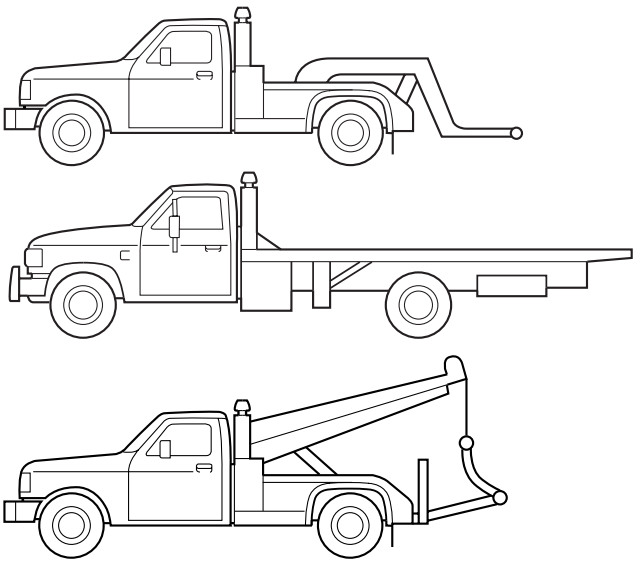


4. Remove the jumper cable from the positive (+) terminal of the disabled vehicle's battery.

After the disabled vehicle has been started and the jumper cables removed, allow it to idle for several minutes so the engine computer can *relearn* its idle conditions.

When the battery is disconnected or a new battery is installed, the transmission must relearn its adaptive strategy. As a result of this, the transmission may shift firmly. This operation is considered normal and will not effect function or durability of the transmission. Over time, the adaptive learning process will fully update transmission operation to its optimum shift feel.

WRECKER TOWING



If you need to have your vehicle towed, contact a professional towing service or, if you are a member, your roadside assistance center.

On 4x2 vehicles, it is acceptable to tow the vehicle with the front wheels on the ground and the rear wheels off the ground using a wheel lift or a slingbelt with T-hooks.

On 4x4 vehicles, it is recommended that your vehicle be towed with a wheel lift or flatbed equipment with all the wheels off the ground. However, a slingbelt with T-hooks and a wheel dolly can also be used.

If the vehicle is towed by other means or incorrectly, vehicle damage may occur.

Ford Motor Company provides a towing manual for all authorized tow truck operators. Have your tow truck operator refer to this manual for proper hook-up and towing procedures for your vehicle.

SERVICE RECOMMENDATIONS

To help you service your vehicle:

- We highlight do-it-yourself items in the engine compartment for easy location.
- We provide a scheduled maintenance guide which makes tracking routine service easy.

If your vehicle requires professional service, your dealership can provide the necessary parts and service. Check your *Warranty Guide* to find out which parts and services are covered.

Use only recommended fuels, lubricants, fluids and service parts conforming to specifications. Motorcraft parts are designed and built to provide the best performance in your vehicle.

PRECAUTIONS WHEN SERVICING YOUR VEHICLE

Be especially careful when inspecting or servicing your vehicle.

- Do not work on a hot engine.
- When the engine is running, keep loose clothing, jewelry or long hair away from moving parts.
- Do not work on a vehicle with the engine running in an enclosed space, unless you are sure you have enough ventilation.
- Keep all lit cigarettes, open flames and other lit material away from the battery and all fuel related parts.

If you disconnect the battery, the engine must “relearn” its idle conditions before your vehicle will drive properly, as explained in the *Battery* section in this chapter.

Working with the engine off

- Automatic transmission:

1. Set the parking brake and ensure the gearshift is securely latched in P (Park).
2. Turn off the engine and remove the key.
3. Block the wheels to prevent the vehicle from moving unexpectedly.

- Manual transmission:

1. Set the parking brake.
2. Depress the clutch and place the gearshift in 1 (First).
3. Turn off the engine and remove the key.
4. Block the wheels to prevent the vehicle from moving unexpectedly.

Working with the engine on

- Automatic transmission:

1. Set the parking brake and ensure the gearshift is securely latched in P (Park).
2. Block the wheels to prevent the vehicle from moving unexpectedly.

NOTE: Do not start your engine with the air cleaner removed and do not remove it while the engine is running.

- Manual transmission:

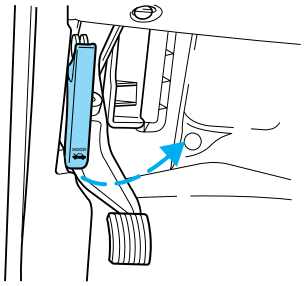
1. Set the parking brake, depress the clutch and place the gearshift in neutral.
2. Block the wheels to prevent the vehicle from moving unexpectedly.

NOTE: Do not start your engine with the air cleaner removed and do not remove it while the engine is running.

The cooling fan is automatic and may come on at any time. Always disconnect the negative terminal of the battery before working near the fan.

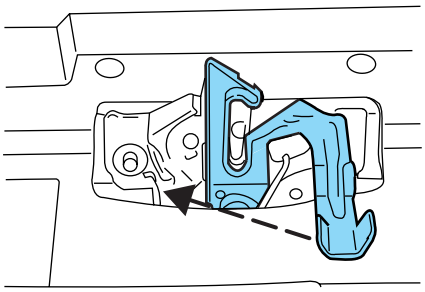
OPENING THE HOOD

1. Inside the vehicle, pull the hood release handle located under the bottom left corner of the instrument panel.



2. Go to the front of the vehicle and release the auxiliary latch located under the right center of the hood. Slide the handle to release the auxiliary latch.

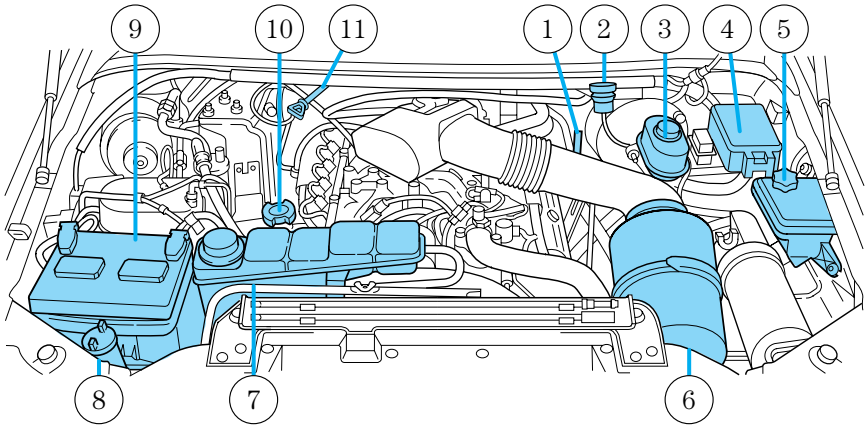
3. Lift the hood until the lift cylinders hold it open.



IDENTIFYING COMPONENTS IN THE ENGINE COMPARTMENT

5.4L V8/6.8L V10 gasoline engines

Refer to the *7.3 Liter Power Stroke Direct Injection Turbo Diesel Owner's Guide Supplement* for diesel engine component locations.



1. Engine oil dipstick
2. Clutch fluid reservoir (manual transmission)
3. Brake fluid reservoir
4. Power distribution box
5. Power steering fluid reservoir
6. Air filter assembly
7. Engine coolant reservoir
8. Windshield washer fluid reservoir
9. Battery
10. Engine oil filler cap
11. Transmission fluid dipstick (automatic transmission)

ENGINE OIL

Checking the engine oil

Refer to the scheduled maintenance guide for the appropriate intervals for checking the engine oil.

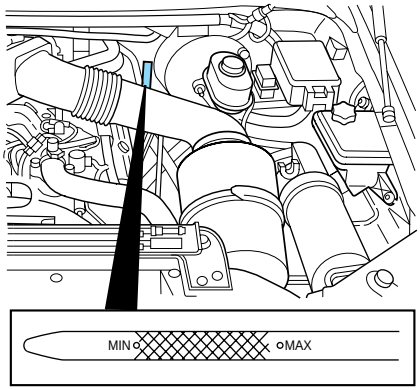
1. Make sure the vehicle is on level ground.

2. Turn the engine off and wait a few minutes for the oil to drain into the oil pan.

3. Set the parking brake and ensure the gearshift is securely latched in P (Park) (automatic transmission) or 1 (First) (manual transmission).

4. Open the hood. Protect yourself from engine heat.

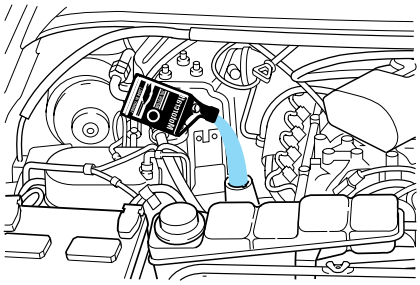
5. Locate and carefully remove the engine oil level indicator (dipstick).



6. Wipe the indicator clean. Insert the indicator fully, then remove it again.

- If the oil level is **between the MIN and MAX marks,** the oil level is acceptable. **DO NOT ADD OIL.**

- If the oil level is below the MIN mark, add enough oil to raise the level within the MIN-MAX range.



- Oil levels above the MAX mark may cause engine damage. Some oil must be removed from the engine by a service technician.

7. Put the indicator back in and ensure it is fully seated.

Adding engine oil

1. Check the engine oil. For instructions, refer to *Checking the engine oil* in this chapter.

2. If the engine oil level is not within the normal range, add only certified engine oil of the recommended viscosity. Remove the engine oil filler cap and use a funnel to pour the engine oil into the opening.

3. Recheck the engine oil level. Make sure the oil level is not above the MAX mark on the engine oil level indicator (dipstick).

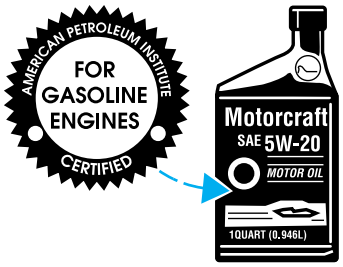
4. Install the indicator and ensure it is fully seated.

5. Fully install the engine oil filler cap by turning the filler cap clockwise 1/4 of a turn until three clicks are heard until it is latched.

To avoid possible oil loss, DO NOT operate the vehicle with the engine oil level indicator and/or the engine oil filler cap removed.

Engine oil and filter recommendations

Look for this certification trademark.



SAE 5W-20 engine oil is recommended.

Only use oils "Certified For Gasoline Engines" by the American Petroleum Institute (API). Use Motorcraft or an equivalent oil meeting Ford specification WSS-M2C153–H. **SAE 5W-20 oil provides optimum fuel economy and durability performance meeting all requirements for your vehicle's engine**.

Do not use supplemental engine oil additives, oil treatments or engine treatments. They are unnecessary and could, under certain conditions, lead to engine damage which is not covered by your warranty.

Change your engine oil and filter according to the appropriate schedule listed in the scheduled maintenance guide.

Ford production and aftermarket (Motorcraft) oil filters are designed for added engine protection and long life. If a replacement oil filter is used that does not meet Ford material and design specifications, start-up engine noises or knock may be experienced.

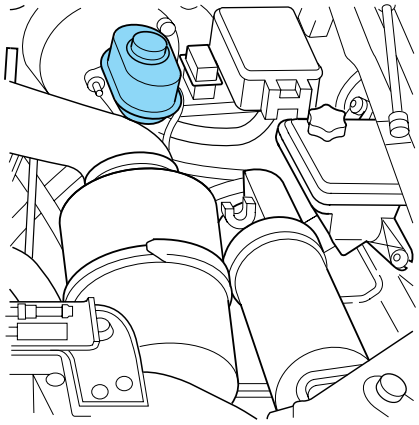
It is recommended you use the appropriate Motorcraft oil filter (or another brand meeting Ford specifications) for your engine application.

BRAKE FLUID

Checking and adding brake fluid

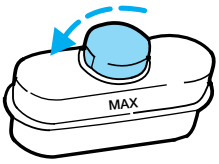
Brake fluid should be checked and refilled as needed. Refer to the scheduled maintenance guide for the service interval schedules.

1. Clean the reservoir cap before removal to prevent dirt or water from entering the reservoir.



2. Visually inspect the fluid level.

3. If necessary, add brake fluid from a clean un-opened container until the level reaches MAX. Do not fill above this line.



4. Use only a DOT 3 brake fluid certified to meet Ford specification ESA-M6C25–A. Refer to *Lubricant specifications* in the *Capacities and specifications* chapter.

Brake fluid is toxic. If brake fluid contacts the eyes, flush eyes with running water for 15 minutes. Seek medical attention if irritation persists. If taken internally, drink water and induce vomiting. Seek medical attention immediately.

If you use a brake fluid that is not DOT 3, you will cause permanent damage to your brakes.

Do not let the reservoir for the master cylinder run dry. This may cause the brakes to fail.

CLUTCH FLUID (IF EQUIPPED)

Check the clutch fluid level. Refer to the scheduled maintenance guide for the service interval schedules.

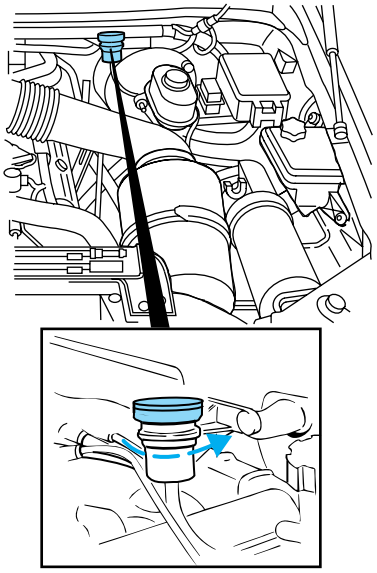
Use only a DOT 3 brake fluid designed to meet Ford specification ESA-M6C25–A. Refer to *Capacities and specifications*.

Brake fluid is toxic. If brake fluid contacts the eyes, flush eyes with running water for 15 minutes. Seek medical if irritation persists. If taken internally, drink water and induce vomiting. Seek medical attention immediately.

For vehicles equipped with the 6–speed manual transmission, during normal operation, the fluid level in the clutch reservoir should remain constant or rise slightly. If the fluid level drops, refill the fluid level to the step in the reservoir.

For vehicles equipped with the 5–speed manual transmission, during normal operation, the fluid level in the clutch reservoir will drop slightly. As this occurs, refill the fluid level to the step in the reservoir.

1. Clean the reservoir cap before removal to prevent dirt and water from entering the reservoir.
2. Remove cap and rubber diaphragm from reservoir.
3. Add fluid until the level reaches the step in the reservoir.
4. Reinstall rubber diaphragm and cap onto reservoir.

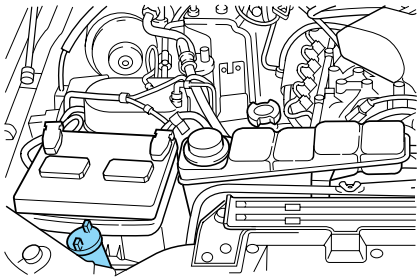


WINDSHIELD WASHER FLUID

Washer fluid

Check the washer fluid whenever you stop for fuel. The reservoir is highlighted with a symbol.

If the level is low, add enough fluid to fill the reservoir. In very cold weather, do not fill the reservoir all the way.



Only use a washer fluid that meets Ford specification . Refer to *Lubricant specifications* in the *Capacities and specifications* chapter.

State or local regulations on volatile organic compounds may restrict the use of methanol, a common windshield washer antifreeze additive. Washer fluids containing non-methanol antifreeze agents should be used only if they provide cold weather protection without damaging the vehicle's paint finish, wiper blades or washer system.

Do not put washer fluid in the engine coolant reservoir. Washer fluid placed in the cooling system may harm engine and cooling system components.

ENGINE COOLANT

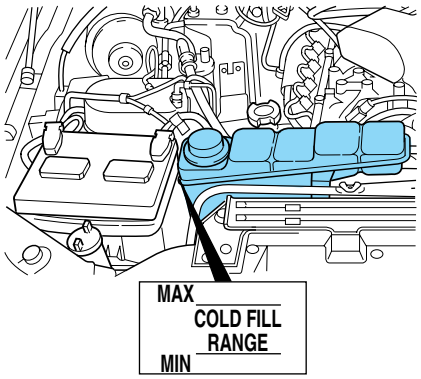
Checking engine coolant

The concentration and level of engine coolant should be checked at the mileage intervals listed in the scheduled maintenance guide. The coolant concentration should be maintained at 50/50 coolant and water, which equates to a freeze point of -36° C (-34° F). Coolant concentration testing is possible with a hydrometer or antifreeze tester (such as the Rotunda Battery and Antifreeze Tester, 014–R1060). The level of coolant should be maintained at the "cold full" of "cold fill range" level in the coolant reservoir. If the level falls below, add coolant per the instructions in the *Adding Engine Coolant* section.

Your vehicle was factory-filled with a 50/50 engine coolant and water concentration. If the concentration of coolant falls below 40% or above 60%, the engine parts could become damaged or not work properly. **A 50–50 mixture of coolant and water provides the following:**

- **Freeze protection down to -36° C (-34° F).**
- **Boiling protection up to 129° C (265° F).**
- **Protection against rust and other forms of corrosion.**
- **Enables calibrated gauges to work properly.**

When the engine is cold, check the level of the engine coolant in the reservoir.



- The engine coolant should be at the “cold fill level” or within the “cold fill range” as listed on the engine coolant reservoir (depending upon application).
- Refer to the Scheduled Maintenance Guide for service interval schedules.
- Be sure to read and understand *Precautions when servicing your vehicle* in this chapter.

If the engine coolant has not been checked at the recommended interval, the engine coolant reservoir may become low or empty. If the reservoir is low or empty, add engine coolant to the reservoir. Refer to *Adding engine coolant* in this chapter.

NOTE: Automotive fluids are not interchangeable; do not use engine coolant, antifreeze or windshield washer fluid outside of its specified function and vehicle location.

Adding engine coolant

When adding coolant, make sure it is a 50/50 mixture of engine coolant and distilled water. Add the mixture to the coolant reservoir, **when the engine is cool**, until the appropriate fill level is obtained.

Do not add engine coolant when the engine is hot. Steam and scalding liquids released from a hot cooling system can burn you badly. Also, you can be burned if you spill coolant on hot engine parts.

Do not put engine coolant in the windshield washer fluid container. If sprayed on the windshield, engine coolant could make it difficult to see through the windshield.

The cooling system in your vehicle is filled with either green-colored Motorcraft Premium Engine Coolant meeting Ford specification ESE-M97B44–A or yellow-colored Motorcraft Premium Gold Engine Coolant meeting Ford Specification WSS-M97B51–A1. To determine your vehicle's coolant type (color), check your coolant reservoir.

- **Add Motorcraft Premium Engine Coolant (green-colored), VC-4–A (U.S.) or CXC-10 (Canada) or Motorcraft Premium Gold Engine Coolant (yellow-colored), VC-7–A, depending on the type of coolant originally equipped in your vehicle.** If you are unsure which type of coolant your vehicle requires, check your coolant reservoir or contact your local dealer.
- **Do not add/mix an orange-colored, extended life coolant such as Motorcraft Speciality Orange Engine Coolant, VC-2 (US) or CXC-209 (Canada), meeting Ford specification WSS-M97B44–D with the factory-filled coolant.** Mixing Motorcraft Speciality Orange Engine Coolant or any orange-colored extended life product with your factory filled coolant can result in degraded corrosion protection.
- A large amount of water without engine coolant may be added, in case of emergency, to reach a vehicle service location. In this instance, the cooling system must be drained and refilled with a 50/50 mixture of engine coolant and distilled water as soon as possible. Water alone (without engine coolant) can cause engine damage from corrosion, overheating or freezing.

- **Do not use alcohol, methanol or brine or any engine coolants mixed with alcohol or methanol antifreeze (coolant).** Alcohol and other liquids can cause engine damage from overheating or freezing.
- **Do not add extra inhibitors or additives to the coolant.** These can be harmful and compromise the corrosion protection of the engine coolant.
- **Do not mix with recycled coolant unless from a Ford-approved recycling process (see** *Use of Recycled Engine Coolant* **section).**

For vehicles with overflow coolant systems with a non-pressurized cap on the coolant recovery system, add coolant to the coolant recovery reservoir when the engine is cool. Add the proper mixture of coolant and water to the "cold full" level. For all other vehicles, which have a coolant degas system with a pressurized cap, or if it is necessary to remove the coolant pressure relief cap on the radiator of a vehicle with an overflow system, follow these steps to add engine coolant.

To avoid personal injury, make sure the engine is cool before unscrewing the coolant pressure relief cap. The cooling system is under pressure; steam and hot liquid can come out forcefully when the cap is loosened slightly.

1. Before you begin, turn the engine off and let it cool.
2. When the engine is cool, wrap a thick cloth around the coolant pressure relief cap on the coolant reservoir (an opaque plastic bottle). Slowly turn cap counterclockwise (left) until pressure begins to release.
3. Step back while the pressure releases.
4. When you are sure that all the pressure has been released, use the cloth to turn it counterclockwise and remove the cap.
5. Fill the coolant reservoir slowly with the proper coolant mixture (see above), to within the "cold fill range" or the "cold full" level on the reservoir. If you removed the radiator cap in an overflow system, fill the radiator until the coolant is visible and radiator is almost full.
6. Replace the cap. Turn until tightly installed. (Cap must be tightly installed to prevent coolant loss.)

After any coolant has been added, check the coolant concentration see Checking Engine Coolant section). If the concentration is not 50/50 (protection to –34°F/–36°C), drain some coolant and adjust the concentration. It may take several drains and additions to obtain a 50/50 coolant concentration.

Whenever coolant has been added, the coolant level in the coolant reservoir should be checked the next few times you drive the vehicle. If necessary, add enough 50/50 concentration of engine coolant and distilled water to bring the liquid level to the proper level.

If you have to add more than 1.0 liter (1.0 quart) of engine coolant per month, have your dealer check the engine cooling system. Your cooling system may have a leak. Operating an engine with a low level of coolant can result in engine overheating and possible engine damage.

Recycled engine coolant

Ford Motor Company recommends the use of a recycled engine coolant produced by Ford-approved processes in vehicles originally equipped with Motorcraft Premium Engine Coolant (green-colored). However, not all coolant recycling processes produce coolant that meets Ford specification ESE-M97B44–A. Use of such coolant may harm the engine and cooling system components.

Ford Motor Company does NOT recommend the use of recycled engine coolant in vehicles originally equipped with Motorcraft Premium Gold Engine Coolant since a Ford-approved recycling process is not yet available.

Used engine coolant should be disposed of in an appropriate manner. Follow your community's regulations and standards for recycling and disposing of automotive fluids.

Coolant refill capacity

To find out how much fluid your vehicle's cooling system can hold, refer to *Refill capacities* in the *Capacities and specifications* chapter.

Fill your engine coolant reservoir as outlined in *Adding engine coolant* in this chapter.

Severe climates

If you drive in extremely cold climates (less than –36° C [–34° F]), it may be necessary to increase the coolant concentration above 50%.

Refer to the chart on the coolant container to ensure the coolant concentration in your vehicle will provide adequate freeze protection. **Never increase the engine coolant concentration above 60%** (protection to –60°F). At a level over 60%, your engine could overheat and become damaged.

If you drive in extremely hot climates, it is still necessary to maintain the coolant concentration at 50/50 coolant and water. **Do not allow the coolant concentration to fall below 40% coolant.** At a concentration less than 40%, the corrosion protection to your engine and cooling components may be compromised and permanent damage may result.

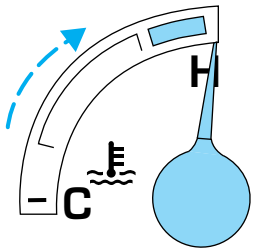
What you should know about fail-safe cooling (if equipped)

If the engine coolant supply is depleted, this feature allows the vehicle to be driven temporarily before incremental component damage is incurred. The "fail-safe" distance depends on ambient temperatures, vehicle load and terrain.

How fail-safe cooling works

If the engine begins to overheat:

- The engine coolant temperature gauge will move to the red (hot) area.
- The and symbol will illuminate.
- The *Service Engine Soon* indicator light will illuminate.



If the engine reaches a preset over-temperature condition, the engine will automatically switch to alternating cylinder operation. Each disabled cylinder acts as an air pump and cools the engine.

When this occurs the vehicle will still operate. However:

- The engine power will be limited.
- The air conditioning system will be disabled.

Continued operation will increase the engine temperature and the engine will completely shut down, causing steering and braking effort to increase.

Once the engine temperature cools, the engine can be re-started. Take your vehicle to a service facility as soon as possible to minimize engine damage.

When fail-safe mode is activated

You have limited engine power when in the fail-safe mode, so drive the vehicle with caution. The vehicle will not be able to maintain high-speed operation and the engine will run rough. Remember that the engine is capable of completely shutting down automatically to prevent engine damage, therefore:

1. Pull off the road as soon as safely possible and turn off the engine.
2. Arrange for the vehicle to be taken to a service facility.
3. If this is not possible, wait a short period for the engine to cool.
4. Check the coolant level and replenish if low.

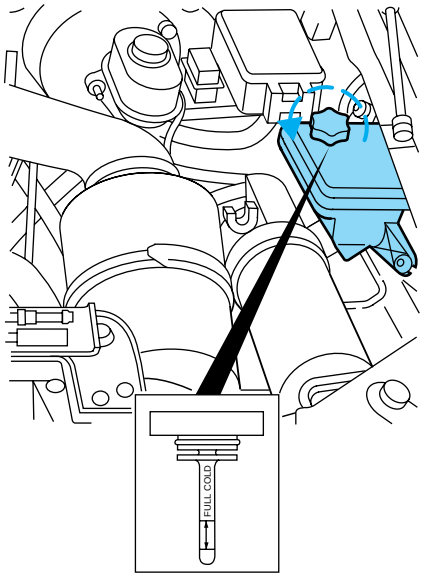
Never remove the coolant reservoir cap while the engine is running or hot.

5. Re-start the engine and take your vehicle to a service facility.

Driving the vehicle without repairing the engine problem increases the chance of engine damage. Take your vehicle to a service facility as soon as possible.

CHECKING AND ADDING POWER STEERING FLUID

Check the power steering fluid. Refer to the scheduled maintenance guide for the service interval schedules. If adding fluid is necessary, use only MERCON® ATF.



Check the fluid level when it is at ambient temperature, 20° – 80° F (-7° – 25° C):

1. Check the fluid level on the dipstick. It should be between the arrows in the FULL COLD range. Do not add fluid if the level is within this range.
2. If the fluid level is low, start the engine.
3. While the engine idles, turn the steering wheel left and right several times.
4. Turn the engine off.
5. Recheck the fluid level on the dipstick. Do not add fluid if the level is between the arrows in the FULL COLD range.
6. If the fluid is low, add fluid in small amounts, continuously checking the level until it reaches the FULL COLD range. Be sure to put the dipstick back in the reservoir.

TRANSMISSION FLUID

Checking automatic transmission fluid (if equipped)

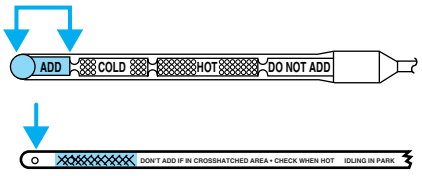
Refer to your scheduled maintenance guide for scheduled intervals for fluid checks and changes. Your transmission does not consume fluid. However, the fluid level should be checked if the transmission is not working properly, i.e., if the transmission slips or shifts slowly or if you notice some sign of fluid leakage.

Automatic transmission fluid expands when warmed. To obtain an accurate fluid check, drive the vehicle until it is at normal operating temperature (approximately 30 km [20 miles]). If your vehicle has been operated for an extended period at high speeds, in city traffic during hot weather or pulling a trailer, the vehicle should be turned off for about 30 minutes to allow fluid to cool before checking.

1. Drive the vehicle 30 km (20 miles) or until it reaches normal operating temperature.
2. Park the vehicle on a level surface and engage the parking brake.
3. With the parking brake engaged and your foot on the brake pedal, start the engine and move the gearshift lever through all of the gear ranges. Allow sufficient time for each gear to engage.
4. Latch the gearshift lever in P (Park) and leave the engine running.
5. Remove the dipstick, wiping it clean with a clean, dry lint free rag. If necessary, refer to *Identifying components in the engine compartment* in this chapter for the location of the dipstick.
6. Install the dipstick making sure it is fully seated in the filler tube.
7. Remove the dipstick and inspect the fluid level. The fluid should be in the designated area for normal operating temperature or ambient temperature.

Low fluid level

Do not drive the vehicle if the fluid level is at the bottom of the dipstick and the ambient temperature is above 10°C (50°F).



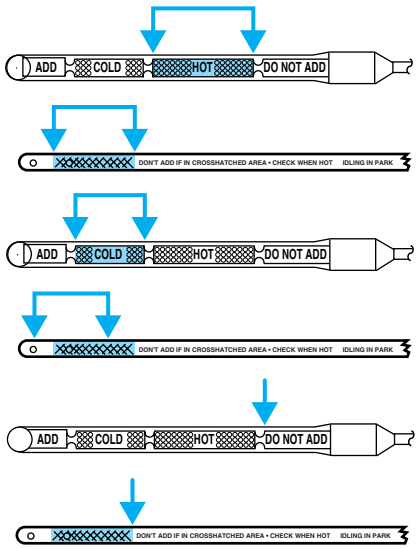
Correct fluid level

The transmission fluid should be checked at normal operating temperature 66°C-77°C (150°F-170°F) on a level surface. The normal operating temperature can be reached after approximately 30 km (20 miles) of driving.

You can check the fluid without driving if the ambient temperature is above 10°C (50°F). However, if fluid is added at this time, an overfill condition could result when the vehicle reaches normal operating temperature.

The transmission fluid should be in this range if at normal operating temperature (66°C-77°C [150°F-170°F]).

The transmission fluid should be in this range if at ambient temperature (10°C-35°C [50°F-95°F]).



High fluid level

Fluid levels above the safe range may result in transmission failure. An overfill condition of transmission fluid may cause shift and/or engagement concerns and/or possible damage.

High fluid levels can be caused by an overheating condition.

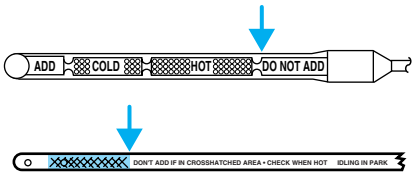
Adjusting automatic transmission fluid levels

Before adding any fluid, make sure the correct type is used. The type of fluid used is normally indicated on the dipstick and also in the *Lubricant specifications* section in the *Capacities and specifications* chapter.

Use of a non-approved automatic transmission fluid may cause internal transmission component damage.

If necessary, add fluid in 250 ml (1/2 pint) increments through the filler tube until the level is correct.

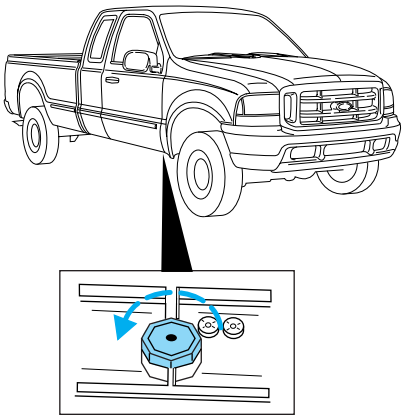
If an overfill occurs, excess fluid should be removed by a qualified technician.



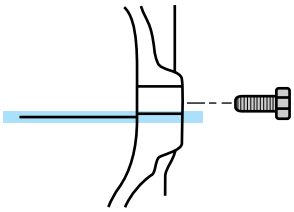
An overfill condition of transmission fluid may cause shift and/or engagement concerns and/or possible damage.

Checking and adding manual transmission fluid (if equipped)

1. Clean the filler plug.
2. Remove the filler plug and inspect the fluid level.



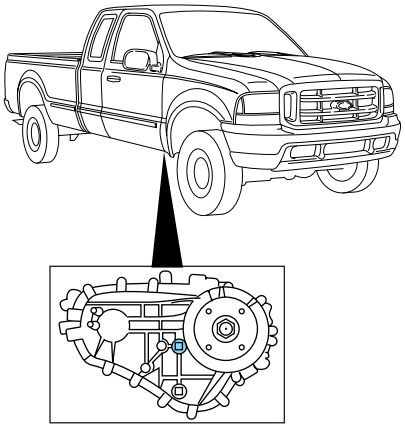
3. Fluid level should be at bottom of the opening.
4. Add enough fluid through the filler opening so that the fluid level is at the bottom of the opening.
5. Install and tighten the fill plug securely.



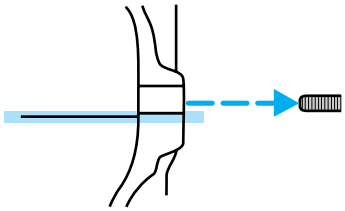
Use only fluid that meets Ford specifications. Refer to the *Capacities and specifications* chapter.

Checking and adding transfer case fluid (if equipped)

1. Clean the filler plug.
2. Remove the filler plug and inspect the fluid level.



3. Add only enough fluid through the filler opening so that the fluid level is at the bottom of the opening.



Use only fluid that meets Ford specifications. Refer to the *Capacities and specifications* chapter.

AIR FILTER MAINTENANCE

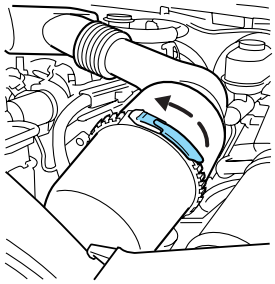
Refer to the scheduled maintenance guide for the appropriate intervals for changing the air filter element.

When changing the air filter element, use only the Motorcraft air filter element listed. Refer to *Motorcraft Part Numbers*.

Note: Do not start your engine with the air cleaner removed and do not remove it while the engine is running.

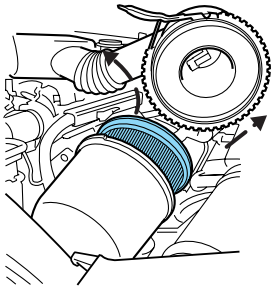
Changing the air filter element (gasoline engines only)

1. Loosen the clamp that secures the air filter element in place.



2. Carefully separate the two halves of the air filter housing.

3. Remove the air filter element from the open end of the air filter housing.



4. Install a new air filter element, ensuring the arrow on the top half of the air filter housing lines up with the notch on the bottom half of air filter housing. Be careful not to crimp the filter element edges between the air filter housing. This could cause filter damage and allow unmetered air to enter the engine if not properly seated.

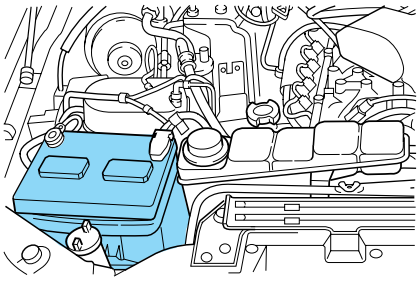
5. Replace the two halves of the air filter housing and secure the clamp.

DRIVELINE UNIVERSAL JOINT AND SLIP YOKE

Your vehicle may be equipped with universal joints that require lubrication. Refer to the scheduled maintenance guide for maintenance intervals. If the original universal joints are replaced with universal joints equipped with grease fittings, lubrication will also be necessary.

BATTERY

Your vehicle is equipped with a Motorcraft maintenance-free battery which normally does not require additional water during its life of service.



However, for severe usage or in high temperature climates, check the battery electrolyte level. Refer to the scheduled maintenance guide for the service interval schedules.

Keep the electrolyte level in each cell up to the "level indicator". Do not overfill the battery cells.

If the electrolyte level in the battery is low, you can add plain tap water to the battery, as long as you do not use hard water (water with a high mineral or alkali content). If possible, however, try to only fill the battery cells with distilled water. If the battery needs water often, have the charging system checked.

If your battery has a cover/shield, make sure it is reinstalled after the battery has been cleaned or replaced.

For longer, trouble-free operation, keep the top of the battery clean and dry. Also, make certain the battery cables are always tightly fastened to the battery terminals.

If you see any corrosion on the battery or terminals, remove the cables from the terminals and clean with a wire brush. You can neutralize the acid with a solution of baking soda and water.

When the battery is disconnected or a new battery installed, the transmission must learn its adaptive strategy. As a result of this, the transmission may shift firmly. This operation is considered normal and will fully update transmission operation to its optimum shift feel.

Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks or lighted substances to come near the battery. When working near the battery, always shield your face and protect your eyes. Always provide proper ventilation.

When lifting a plastic-cased battery, excessive pressure on the end walls could cause acid to flow through the vent caps, resulting in personal injury and/or damage to the vehicle or battery. Lift the battery with a battery carrier or with your hands on opposite corners.

Keep batteries out of reach of children. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing. Shield your eyes when working near the battery to protect against possible splashing of acid solution. In case of acid contact with skin or eyes, flush immediately with water for a minimum of 15 minutes and get prompt medical attention. If acid is swallowed, call a physician immediately.

Battery posts, terminals and related accessories contain lead and lead compunds. **Wash hands after handling**.

For information on transmission operation after the battery has been disconnected see “Shift strategy” in the driving section.

Because your vehicle’s engine is also electronically controlled by a computer, some control conditions are maintained by power from the battery. When the battery is disconnected or a new battery is installed, the engine must relearn its idle and fuel trim strategy for optimum driveability and performance. To begin this process:

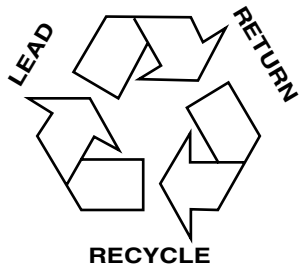
1. With the vehicle at a complete stop, set the parking brake.
2. Put the gearshift in P (Park) (automatic transmission) or the neutral position (manual transmission), turn off all accessories and start the engine.
3. Run the engine until it reaches normal operating temperature.
4. Allow the engine to idle for at least one minute.
5. Turn the A/C on and allow the engine to idle for at least one minute.

6. Drive the vehicle to complete the relearning process.

- The vehicle may need to be driven 16 km (10 miles) or more to relearn the idle and fuel trim strategy.
- **If you do not allow the engine to relearn its idle trim, the idle quality of your vehicle may be adversely affected until the idle trim is eventually relearned.**

If the battery has been disconnected or a new battery has been installed, the clock and the preset radio stations must be reset once the battery is reconnected.

- Always dispose of automotive batteries in a responsible manner. Follow your local authorized standards for disposal. Call your local authorized recycling center to find out more about recycling automotive batteries.



WINDSHIELD WIPER BLADES

Check the wiper blades at least twice a year or when they seem less effective. Substances such as tree sap and some hot wax treatments used by commercial car washes reduce the effectiveness of wiper blades.

Checking the wiper blades

If the wiper blades do not wipe properly, clean both the windshield and wiper blades using undiluted windshield wiper solution or a mild detergent. Rinse thoroughly with clean water. To avoid damaging the blades, do not use fuel, kerosene, paint thinner or other solvents.

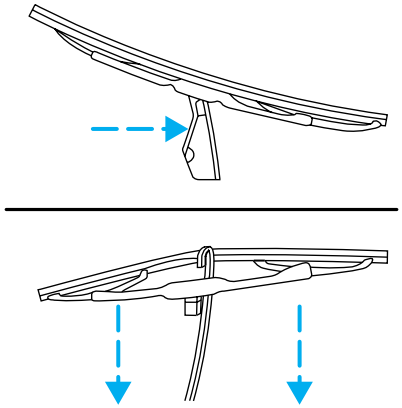
Changing the wiper blades

To replace the wiper blades:

1. Pull the wiper arm away from the windshield and lock into the service position.

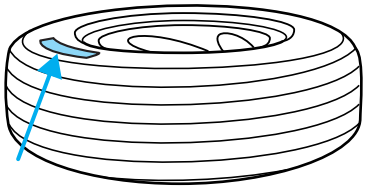
2. Turn the blade at an angle from the wiper arm. Push the lock pin manually to release the blade and pull the wiper blade down toward the windshield to remove it from the arm.

3. Attach the new wiper to the wiper arm and press it into place until a click is heard.



INFORMATION ABOUT UNIFORM TIRE QUALITY GRADING

New vehicles are fitted with tires that have a rating on them called Tire Quality Grades. The Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:



- **Treadwear 200 Traction AA Temperature A**

These Tire Quality Grades are determined by standards that the United States Department of Transportation has set.

Tire Quality Grades apply to new pneumatic tires for use on passenger cars. They do not apply to deep tread, winter-type snow tires, space-saver or temporary use spare tires, tires with nominal rim diameters of 10 to 12 inches or limited production tires as defined in Title 49 Code of Federal Regulations Part 575.104(c)(2).

U.S. Department of Transportation-Tire quality grades: The U.S. Department of Transportation requires Ford to give you the following information about tire grades exactly as the government has written it.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1 1/2) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices, and differences in road characteristics and climate.

Traction AA A B C

The traction grades, from highest to lowest are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning or peak traction characteristics.

Temperature A B C

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

SERVICING YOUR TIRES

Checking the tire pressure

- Use an accurate tire pressure gauge.
- Check the tire pressure when tires are cold, after the vehicle has been parked for at least one hour or has been driven less than 5 km (3 miles).
- Adjust tire pressure to recommended specifications found on the Certification Label. Tire pressure information can also be found on the Tire Information label located on the inside of the fuel filler door.

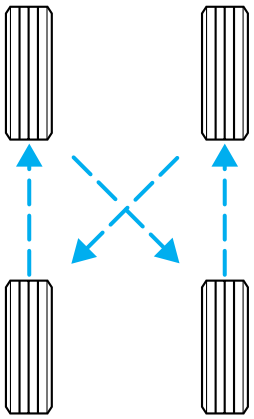
Improperly inflated tires can affect vehicle handling and can fail suddenly, possibly resulting in loss of vehicle control.

Tire rotation

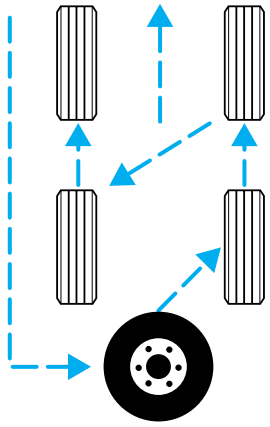
Because your vehicle's tires perform different jobs, they often wear differently. To make sure your tires wear evenly and last longer, rotate them as indicated in the scheduled maintenance guide. If you notice that the tires wear unevenly, have them checked.

The following procedure applies to vehicles equipped with single rear wheels, if your vehicle is equipped with dual rear wheels it is recommended that only the front wheels be rotated (side to side).

- Four tire rotation

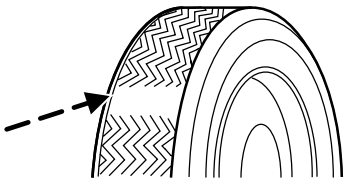


- Five tire rotation



Replacing the tires

Replace the tires when the wear band is visible through the tire treads.



When replacing full size tires, never mix radial bias-belted, or bias-type tires. Use only the tire sizes that are listed on the Certification Label. Make sure that all tires are the same size, speed rating, and load-carrying capacity. Use only the tire combinations recommended on the label. If you do not follow these precautions, your vehicle may not drive properly and safely.

Make sure that all replacement tires are of the same size, type, load-carrying capacity and tread design (e.g., “All Terrain”, etc.), as originally offered by Ford.

Do not replace your tires with “high performance” tires or larger size tires.

Failure to follow these precautions may adversely affect the handling of the vehicle and make it easier for the driver to lose control and roll over.

Tires that are larger or smaller than your vehicle’s original tires may also affect the accuracy of your speedometer.

SNOW TIRES AND CHAINS

Snow tires must be the same size and grade as the tires you currently have on your vehicle.

The tires on your vehicle have all weather treads to provide traction in rain and snow. However, in some climates, you may need to use snow tires and chains. If you need to use chains, it is recommended that steel wheels (of the same size and specifications) be used as chains may chip aluminum wheels.

Follow these guidelines when using snow tires and chains:

- Use only SAE Class S chains.
- Install chains securely, verifying that the chains do not touch any wiring, brake lines or fuel lines.
- Drive cautiously. If you hear the chains rub or bang against your vehicle, stop and re-tighten the chains. If this does not work, remove the chains to prevent damage to your vehicle.
- If possible, avoid fully loading your vehicle.
- Remove the tire chains when they are no longer needed. Do not use tire chains on dry roads.
- The suspension insulation and bumpers will help prevent vehicle damage. Do not remove these components from your vehicle when using snow tires and chains.

WHAT YOU SHOULD KNOW ABOUT AUTOMOTIVE FUELS

Important safety precautions

Do not overfill the fuel tank. The pressure in an overfilled tank may cause leakage and lead to fuel spray and fire.

The fuel system may be under pressure. If the fuel filler cap is venting vapor or if you hear a hissing sound, wait until it stops before completely removing the fuel filler cap. Otherwise, fuel may spray out and injure you or others.

If you do not use the proper fuel filler cap, excessive pressure or vacuum in the fuel tank may damage the fuel system or cause the fuel cap to disengage in a collision, which may result in possible personal injury.

Automotive fuels can cause serious injury or death if misused or mishandled.

Gasoline may contain benzene, which is a cancer-causing agent.

Observe the following guidelines when handling automotive fuel:

- Extinguish all smoking materials and any open flames before fueling your vehicle.
- Always turn off the vehicle before fueling.
- Automotive fuels can be harmful or fatal if swallowed. Fuel such as gasoline is highly toxic and if swallowed can cause death or permanent injury. If fuel is swallowed, call a physician immediately, even if no symptoms are immediately apparent. The toxic effects of fuel may not be visible for hours.
- Avoid inhaling fuel vapors. Inhaling too much fuel vapor of any kind can lead to eye and respiratory tract irritation. In severe cases, excessive or prolonged breathing of fuel vapor can cause serious illness and permanent injury.
- Avoid getting fuel liquid in your eyes. If fuel is splashed in the eyes, remove contact lenses (if worn), flush with water for 15 minutes and seek medical attention. Failure to seek proper medical attention could lead to permanent injury.
- Fuels can also be harmful if absorbed through the skin. If fuel is splashed on the skin and/or clothing, promptly remove contaminated clothing and wash skin thoroughly with soap and water. Repeated or prolonged skin contact with fuel liquid or vapor causes skin irritation.
- Be particularly careful if you are taking “Antabuse” or other forms of disulfiram for the treatment of alcoholism. Breathing gasoline vapors, or skin contact could cause an adverse reaction. In sensitive individuals, serious personal injury or sickness may result. If fuel is splashed on the skin, promptly wash skin thoroughly with soap and water. Consult a physician immediately if you experience an adverse reaction.

When refueling always shut the engine off and never allow sparks or open flames near the filler neck. Never smoke while refueling. Fuel vapor is extremely hazardous under certain conditions. Care should be taken to avoid inhaling excess fumes.

The flow of fuel through a fuel pump nozzle can produce static electricity, which can cause a fire if fuel is pumped into an ungrounded fuel container.

Use the following guidelines to avoid static build-up when filling an ungrounded fuel container:

- Place approved fuel container on the ground.
- DO NOT fill a fuel container while it is in the vehicle (including the cargo area).
- Keep the fuel pump nozzle in contact with the fuel container while filling.
- DO NOT use a device that would hold the fuel pump handle in the fill position.

Choosing the right fuel

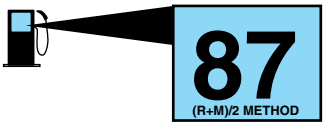
Use only UNLEADED FUEL. The use of leaded fuel is prohibited by law and could damage your vehicle.

Do not use fuel containing methanol. It can damage critical fuel system components.

Your vehicle was not designed to use fuel or fuel additives with metallic compounds, including manganese-based compounds containing MMT.

Repairs to correct the effects of using a fuel for which your vehicle was not designed may not be covered by your warranty.

Octane recommendations



Your vehicle is designed to use "Regular" unleaded gasoline with pump (R+M)/2 octane rating of 87. We do not recommend the use of gasolines labeled as "Regular" that are sold with octane ratings of 86 or lower in high altitude areas.

Do not be concerned if your engine sometimes knocks lightly. However, if it knocks heavily under most driving conditions while you are using fuel with the recommended octane rating, see your dealer or a qualified service technician to prevent any engine damage.

Fuel quality

If you are experiencing starting, rough idle or hesitation driveability problems during a cold start, try a different brand of “Regular” unleaded gasoline. “Premium” unleaded gasoline is not recommended (particularly in the United States) because it may cause these problems to become more pronounced. If the problems persist, see your dealer or a qualified service technician.

It should not be necessary to add any aftermarket products to your fuel tank if you continue to use high quality fuel of the recommended octane rating. Aftermarket products could cause damage to the fuel system. Repairs to correct the effects of using an aftermarket product in your fuel may not be covered by your warranty.

Many of the world’s automakers issued the World-wide Fuel Charter that recommends gasoline specifications to provide improved performance and emission control system protection for your vehicle. Gasolines that meet the World-wide Fuel Charter should be used when available. Ask your fuel supplier about gasolines that meet the World-wide Fuel Charter. In Canada, look for fuels that display the **Auto Makers’ Choice**™ logo.

Cleaner air

Ford endorses the use of reformulated “cleaner-burning” gasolines to improve air quality.

Running out of fuel

Avoid running out of fuel because this situation may have an adverse affect on powertrain components.

If you have run out of fuel:

- You may need to cycle the ignition from OFF to ON several times after refueling, to allow the fuel system to pump the fuel from the tank to the engine.
- Your “Service Engine Soon” indicator may come on. For more information on the “Service Engine Soon” indicator, refer to the *Instrumentation* chapter.

Fuel Filler Cap

Your fuel tank filler cap has an indexed design with a 1/8 turn on/off feature.

When fueling your vehicle:

1. Turn the engine off.
2. Carefully turn the filler cap counterclockwise 1/8 of a turn until it stops.
3. Pull to remove the cap from the fuel filler pipe.
4. To install the cap, align the tabs on the cap with the notches on the filler pipe.
5. Turn the filler cap clockwise 1/8 of a turn until it stops.

If the “Service Engine Soon/Check Engine” indicator comes on and stays on after you start the engine, the fuel filler cap may not be properly installed. Turn off the engine, remove the fuel filler cap, align the cap properly and reinstall it.

If you must replace the fuel filler cap, replace it with a fuel filler cap that is designed for your vehicle. The customer warranty may be void for any damage to the fuel tank or fuel system if the correct genuine Ford or Motorcraft fuel filler cap is not used.

The fuel system may be under pressure. If the fuel filler cap is venting vapor or if you hear a hissing sound, wait until it stops before completely removing the fuel filler cap. Otherwise, fuel may spray out and injure you or others.

If you do not use the proper fuel filler cap, excessive pressure or vacuum in the fuel tank may damage the fuel system or cause the fuel cap to disengage in a collision, which may result in possible personal injury.

Fuel Filter

For fuel filter replacement, see your dealer or a qualified service technician. Refer to the scheduled maintenance guide for the appropriate intervals for changing the fuel filter.

Replace the fuel filter with an authorized Motorcraft part. The customer warranty may be void for any damage to the fuel system if an authorized Motorcraft fuel filter is not used.

ESSENTIALS OF GOOD FUEL ECONOMY

Measuring techniques

Your best source of information about actual fuel economy is you, the driver. You must gather information as accurately and consistently as possible. Fuel expense, frequency of fillups or fuel gauge readings are NOT accurate as a measure of fuel economy. We do not recommend taking fuel economy measurements during the first 1 600 km (1 000 miles) of driving (engine break-in period). You will get a more accurate measurement after 3 000 km–5 000 km (2 000 miles-3 000 miles).

Filling the tank

The advertised fuel capacity of the fuel tank on your vehicle is equal to the rated refill capacity of the fuel tank as listed in the *Refill capacities* section of *the Capacities and specifications* chapter.

The advertised capacity is the amount of the indicated capacity and the empty reserve combined. Indicated capacity is the difference in the amount of fuel in a full tank and a tank when the fuel gauge indicates empty. Empty reserve is the small amount of fuel remaining in the fuel tank after the fuel gauge indicates empty.

The amount of usable fuel in the empty reserve varies and should not be relied upon to increase driving range. When refueling your vehicle after the fuel gauge indicates empty, you might not be able to refuel the full amount of the advertised capacity of the fuel tank due to the empty reserve still present in the tank.

For consistent results when filling the fuel tank:

- Turn the engine/ignition switch to the off position prior to refueling, an error in the reading will result if the engine is left running.
- Use the same filling rate setting (low — medium — high) each time the tank is filled.
- Allow no more than 2 automatic click-offs when filling.
- Always use fuel with the recommended octane rating.
- Use a known quality gasoline, preferably a national brand.
- Use the same side of the same pump and have the vehicle facing the same direction each time you fill up.
- Have the vehicle loading and distribution the same every time.

Your results will be most accurate if your filling method is consistent.

Calculating fuel economy

1. Fill the fuel tank completely and record the initial odometer reading (in kilometers or miles).

2. Each time you fill the tank, record the amount of fuel added (in liters or gallons).

3. After at least three to five tank fill-ups, fill the fuel tank and record the current odometer reading.

4. Subtract your initial odometer reading from the current odometer reading.

5. Follow one of the simple calculations in order to determine fuel economy:

Multiply liters used by 100, then divide by total kilometers traveled.

Divide total miles traveled by total gallons used.

Keep a record for at least one month and record the type of driving (city or highway). This will provide an accurate estimate of the vehicle's fuel economy under current driving conditions. Additionally, keeping records during summer and winter will show how temperature impacts fuel economy. In general, lower temperatures give lower fuel economy.

Driving style — good driving and fuel economy habits

Give consideration to the lists that follow and you may be able to change a number of variables and improve your fuel economy.

Habits

- Smooth, moderate operation can yield up to 10% savings in fuel.
- Steady speeds without stopping will usually give the best fuel economy.
- Idling for long periods of time (greater than one minute) may waste fuel.
- Anticipate stopping; slowing down may eliminate the need to stop.
- Sudden or hard accelerations may reduce fuel economy.
- Slow down gradually.

- Driving at reasonable speeds (traveling at 88 km/h [55 mph] uses 15% less fuel than traveling at 105 km/h [65 mph]).
- Revving the engine before turning it off may reduce fuel economy.
- Using the air conditioner or defroster may reduce fuel economy.
- You may want to turn off the speed control in hilly terrain if unnecessary shifting between third and fourth gear occurs. Unnecessary shifting of this type could result in reduced fuel economy.
- Warming up a vehicle on cold mornings is not required and may reduce fuel economy.
- Resting your foot on the brake pedal while driving may reduce fuel economy.
- Combine errands and minimize stop-and-go driving.

Maintenance

- Keep tires properly inflated and use only recommended size.
- Operating a vehicle with the wheels out of alignment will reduce fuel economy.
- Perform all regularly scheduled maintenance items. Follow the recommended maintenance schedule and owner maintenance checks found in your vehicle scheduled maintenance guide.

Conditions

- Heavily loading a vehicle or towing a trailer may reduce fuel economy at any speed.
- Carrying unnecessary weight may reduce fuel economy (approximately 0.4 km/L [1 mpg] is lost for every 180 kg [400 lb] of weight carried).
- Adding certain accessories to your vehicle (for example bug deflectors, rollbars/light bars, running boards, ski/luggage racks) may reduce fuel economy.
- Using fuel blended with alcohol may lower fuel economy.
- Fuel economy may decrease with lower temperatures during the first 12–16 km (8–10 miles) of driving.
- Driving on flat terrain offers improved fuel economy as compared to driving on hilly terrain.

- Transmissions give their best fuel economy when operated in the top cruise gear and with steady pressure on the gas pedal.
- Four-wheel-drive operation (if equipped) is less fuel efficient than two-wheel-drive operation.
- Close windows for high speed driving.

EPA window sticker

Every new vehicle should have the EPA window sticker. Contact your dealer if the window sticker is not supplied with your vehicle. The EPA window sticker should be your guide for the fuel economy comparisons with other vehicles.

It is important to note the box in the lower left corner of the window sticker. These numbers represent the Range of L/100 km (MPG) expected on the vehicle under optimum conditions. Your fuel economy may vary depending upon the method of operation and conditions.

EMISSION CONTROL SYSTEM

Your vehicle is equipped with various emission control components and a catalytic converter which will enable your vehicle to comply with applicable exhaust emission standards. To make sure that the catalytic converter and other emission control components continue to work properly:

- Use only the specified fuel listed.
- Avoid running out of fuel.
- Do not turn off the ignition while your vehicle is moving, especially at high speeds.
- Have the items listed in your scheduled maintenance guide performed according to the specified schedule.

The scheduled maintenance items listed in the scheduled maintenance guide are essential to the life and performance of your vehicle and to its emissions system.

If other than Ford, Motorcraft or Ford-authorized parts are used for maintenance replacements or for service of components affecting emission control, such non-Ford parts should be equivalent to genuine Ford Motor Company parts in performance and durability.

Do not park, idle, or drive your vehicle in dry grass or other dry ground cover. The emission system heats up the engine compartment and exhaust system, which can start a fire.

Illumination of the “Service Engine Soon” light, charging system warning light or the temperature warning light, fluid leaks, strange odors, smoke or loss of engine power, could indicate that the emission control system is not working properly.

Exhaust leaks may result in entry of harmful and potentially lethal fumes into the passenger compartment.

Do not make any unauthorized changes to your vehicle or engine. By law, vehicle owners and anyone who manufactures, repairs, services, sells, leases, trades vehicles, or supervises a fleet of vehicles are not permitted to intentionally remove an emission control device or prevent it from working. Information about your vehicle’s emission system is on the Vehicle Emission Control Information Decal located on or near the engine. This decal identifies engine displacement and gives some tune up specifications.

Please consult your *Warranty Guide* for complete emission warranty information.

Readiness for Inspection/Maintenance (I/M) testing

In some localities, it may be a legal requirement to pass an I/M test of the on-board diagnostics system. If your “Check Engine/Service Engine Soon” light is on, refer to the description in the *Warning lights and chimes* section of the *Instrumentation* chapter. Your vehicle may not pass the I/M test with the “Check Engine/Service Engine Soon” light on.

If the vehicle’s powertrain system or its battery has just been serviced, the on-board diagnostics system is reset to a “not ready for I/M test” condition. To ready the on-board diagnostics system for I/M testing, a minimum of 30 minutes of city and highway driving is necessary as described below:

- First, at least 10 minutes of driving on an expressway or highway.
- Next, at least 20 minutes driving in stop-and-go, city-type traffic with at least four idle periods.

Allow the vehicle to sit for at least eight hours without starting the engine. Then, start the engine and complete the above driving cycle. The engine must warm up to its normal operating temperature. Once started, do not turn off the engine until the above driving cycle is complete.

BULBS

Replacing exterior bulbs

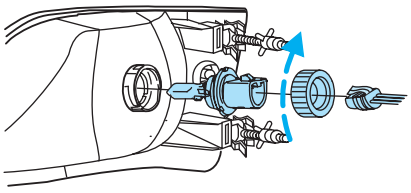
Check the operation of the following lamps frequently:

- Headlamps
- High-mount brakelamp
- Brakelamps
- Turn signals
- License plate lamp
- Tail lamps
- Back-up lamps

Do not remove lamp bulbs unless they can be replaced immediately with new ones. If a bulb is removed for an extended period of time, contaminants may enter the lamp housings and affect lamp performance.

Replacing headlamp bulbs (aerodynamic)

1. Make sure that the headlamp control is in the OFF position.
2. Open the hood.
3. Disconnect the electrical connector from the bulb by pulling rearward.
4. Remove bulb retainer ring by turning it counterclockwise, then slide the ring off the plastic base.
5. Without turning, carefully pull bulb out of headlamp assembly.



Handle a halogen headlamp bulb carefully and keep out of children's reach. Grasp the bulb only by its plastic base and do not touch the glass. The oil from your hand could cause the bulb to break the next time the headlamps are operated.

6. Insert the glass end of the new bulb into the headlamp assembly. When the grooves in the plastic base are aligned, push the bulb into the lamp assembly until the plastic base contacts the rear of the lamp assembly.

7. Install bulb retaining ring over the plastic base and lock the ring into the socket by turning it clockwise until you feel a "stop."

8. Connect the electrical connector into the rear of the plastic base until it "snaps."

Replacing headlamp bulbs (sealed beam)

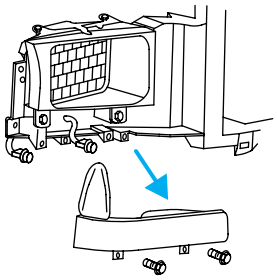
To remove the headlamp bulb:

1. Make sure headlamp switch is in OFF position.

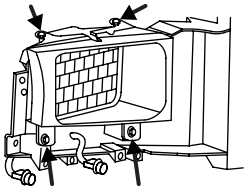
2. Open the hood.

3. Remove the two screws and parking lamp/side marker assembly by pulling gently

4. Disconnect the electrical connectors from the parking lamp/side marker assembly and remove.

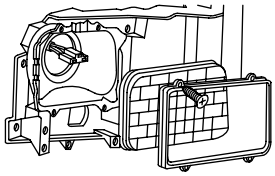


5. Remove the four bolts and headlamp bezel.



6. Remove the four screws and the headlamp retaining ring from headlamp.

7. Disconnect the electrical connector and remove headlamp.



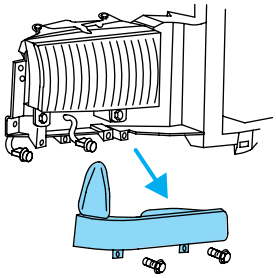
To install the new headlamp, reverse the removal procedure.

Replacing front parking/turn signal bulbs

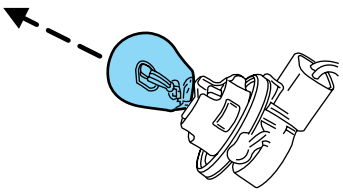
1. Make sure headlamp switch is in OFF position.

2. Open the hood.

3. Remove the two screws and carefully disengage parking lamp/turn signal assembly from the vehicle.



4. Rotate bulb socket counterclockwise about ¼ turn and remove from lamp assembly.



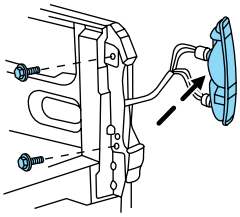
5. Carefully pull bulb straight out of the socket and push in the new bulb.

6. Install the bulb socket in lamp assembly by turning clockwise.

7. Align the lamp assembly on the vehicle.

8. Install two screws on parking lamp/turn signal assembly.

Replacing tail lamp/turn/backup lamp bulbs — F250/F350 only



The tail lamp/backup lamp bulbs are located in the same portion of the tail lamp assembly, one just below the other. Follow the same steps to replace either bulb:

1. Open the tailgate to expose the lamp assemblies.

2. Remove the two bolts from the tail lamp assembly.

3. Carefully pull the lamp assembly from the tailgate pillar by releasing the two retaining tabs.

4. Twist the bulb socket ¼ turn counterclockwise and remove from lamp assembly.

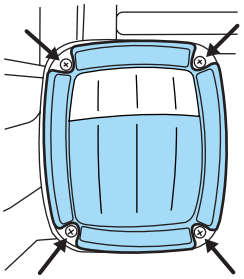
5. Pull the bulb straight out of the socket and push in the new bulb.

6. Install bulb socket in lamp assembly by turning clockwise.

7. Carefully install the tail lamp assembly on tailgate pillar snapping the two retaining tabs into place.

8. Secure the tail lamp with two bolts.

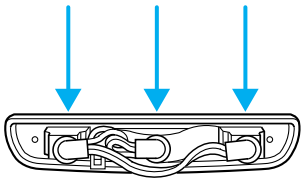
Replacing brake/tail/backup lamp bulbs — F450/F550 only



The brake/tail/backup lamp bulbs are located in the same portion of the tail lamp assembly. Follow the same steps to replace either bulb:

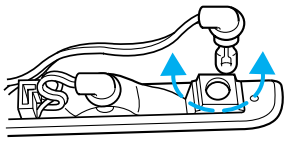
1. Remove the four screws and the lamp lens from lamp assembly.
2. Carefully pull the bulb straight out of the socket and push in the new bulb.
3. Install the lens on the lamp assembly with the four screws.

Replacing cargo lamp and high-mount brakelamp bulbs



To remove the lamp assembly:

1. Remove the two screws and lamp assembly from vehicle as wiring permits.
2. Remove the bulb socket by rotating counterclockwise and pulling it out of the lamp assembly.



3. Pull the bulb straight out of the socket and push in the new bulb.

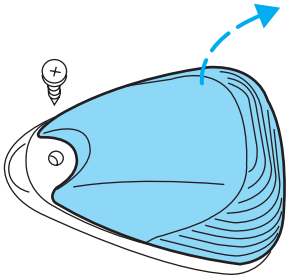
To install the brakelamp assembly:

1. Install the bulb into the lamp assembly and rotate clockwise.
2. Install the lamp assembly on the vehicle with two screws.

Replacing roof marker bulbs

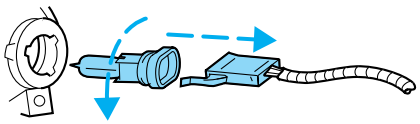
To change the cab marker bulbs:

1. Remove the screw and lens from the lamp assembly.
2. Carefully pull the bulb straight out of the socket and push in the new bulb.
3. Install lens on lamp assembly with screw.



Replacing foglamp bulbs (if equipped)

1. Remove the bulb socket from the foglamp by turning counterclockwise.
2. Disconnect the electrical connector from the foglamp bulb.

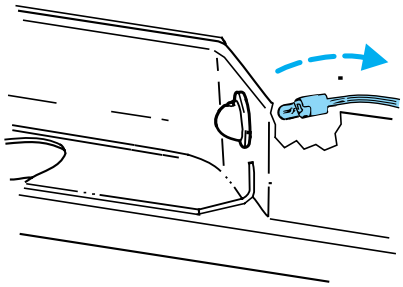


3. Connect the new foglamp bulb to the electrical connector.
4. Install the bulb socket in the foglamp by turning clockwise.

Replacing license plate lamp bulbs

The license plate bulbs are located behind the rear bumper. To change the license plate lamp bulbs:

1. Reach behind the rear bumper to locate the bulb.
2. Twist the bulb socket counterclockwise and carefully pull to remove it from the lamp assembly.



3. Pull out the old bulb from the socket and push in the new bulb.
4. Install the bulb socket in lamp assembly by turning it clockwise.

Using the right bulbs

Replacement bulbs are specified in the chart below. Headlamp bulbs must be marked with an authorized “D.O.T.” for North America and an “E” for Europe to assure lamp performance, light brightness and pattern and safe visibility. The correct bulbs will not damage the lamp assembly or void the lamp assembly warranty and will provide quality bulb burn time.

Function	Number of bulbs	Trade number
Headlamps (aerodynamic)	2	9007
Headlamps (sealed beam)	2	H6054
Park/turn	2	3157
Sidemarker	2	194
Tail/stop/turn/sidemarker	2	3157 K
Backup	2	3156K
High-mount stoplamp	1	921
Foglamp	2	899
License plate lamp	2	168
Cargo lamp	2	906
Roofmarker	5	194
Rear fender clearance	4	[a]
Interior visor lamp (if equipped)	4	194
Rear identification	3	194
All replacement bulbs are clear in color except where noted.		
To replace all instrument panel lights - see your dealer		
[a] Replace entire lamp assembly; bulb is not serviceable.		

AIMING THE HEADLAMPS

The headlamps on your vehicle are properly aimed at the assembly plant.

If your vehicle has been in an accident the alignment of your headlamps should be checked by a qualified service technician.

CLEANING AND CARING FOR YOUR VEHICLE

Refer to the Customer Assistance chapter for a list of Ford-approved cleaners, polishes and waxes.

Washing your vehicle

Wash your vehicle regularly with cold or lukewarm water. Never use strong detergents or soap. If your vehicle is particularly dirty, use a quality car wash detergent. Always use a clean sponge, washing glove or similar device and plenty of water for best results. To avoid spots, avoid washing when the hood is still warm, immediately after or during exposure to strong sunlight.

During winter months, it is especially important to wash the vehicle on a regular basis. Large quantities of dirt and road salt are difficult to remove and also cause damage to the vehicle.

Any gasoline spilled on the vehicle or deposits such as bird droppings should be washed and sponged off as soon as possible. Deposits not removed promptly can cause damage to the vehicle's paintwork.

Remove any exterior accessories (such as antennas) and fold in the side view mirrors before entering a car wash. If you have wax applied to the vehicle at a commercial car wash, it is recommended that you clean the wiper blades and windshield as described in *Cleaning the wiper blades and windshield.*

After washing, apply the brakes several times to dry them.

Underbody

Flush the complete underside of vehicle frequently. Keep body drain holes unplugged. Inspect for road damage.

Waxing your vehicle

Waxing your vehicle on a regular basis will reduce minor scratches and paint damage.

Wax when water stops beading on the surface. This could be every three or four months, depending on operating conditions.

Use only carnauba or synthetic-based waxes. Use a cleaning fluid with a clean cloth to remove any bugs before waxing your vehicle. Use tar remover to remove any tar spots.

Avoid getting wax on the windshield, or on any surfaces which appear coarse or bumpy. If you have wax applied at a commercial car wash, it is recommended that you clean the wiper blades and windshield as described in *Cleaning the wiper blades and windshield.*

Repairing paint chips

Minor scratches or paint damage from road debris may be repaired with the Ultra Touch Prep and Finishing Kit (F7AZ-19K507–BA), Lacquer Touch-up Paint (ALBZ-19500–XXXXA), or Exterior Acrylic Spray Lacquer (ALAZ-19500–XXXXA) from the Ford Car Care Chemicals line. Please note that the part numbers (shown as XXXX above) will vary with your vehicle's specific coloring. Observe the application instructions on the products.

Remove particles such as bird droppings, tree sap, insect remains, tar spots, road salt and industrial fallout immediately.

Cleaning the wheels

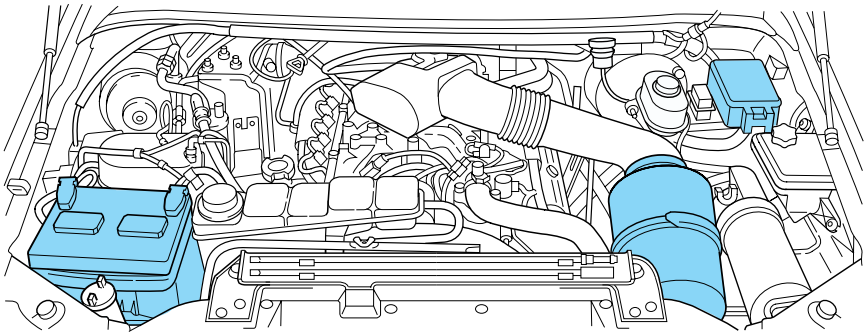
Wash with the same detergent as the body of your vehicle. Do not use acid-based or alcohol-based wheel cleaners, steel wool, fuel or strong detergents. Never use abrasives that will damage the finish of special wheel surfaces. Use a tar remover to remove grease and tar.

The brushes used in some automatic car washes may damage the finish on your wheels. Before going to a car wash, find out if the brushes are abrasive.

Cleaning the engine

Engines are more efficient when they are clean because grease and dirt buildup keep the engine warmer than normal. When washing:

- Take care when using a power washer to clean the engine. The high pressure fluid could penetrate the sealed parts and cause damage.
- Do not spray with cold water to avoid cracking the engine block or other engine components.
- Never wash or rinse the engine while it is running; water in the running engine may cause internal damage.



Cleaning non-painted plastic exterior parts

Use vinyl cleaner for routine cleaning. Clean with a tar remover if necessary. Do not clean plastic parts with thinners, solvents or petroleum-based cleaners.

Cleaning the exterior lamps

Wash with the same detergent as the exterior of your vehicle. If necessary, use a tar remover such as Ford Extra Strength Tar and Road Oil Remover (B7A-19520–AA).

To avoid scratching the lamps, do not use a dry paper towel, chemical solvents or abrasive cleaners.

Cleaning the windshield, wiper blades and rear window

If the wiper blades do not wipe properly, clean the wiper blade rubber element with undiluted windshield washer solution or a mild detergent. To avoid damaging the blades, do not use fuel, kerosene, paint thinner or other solvents.

If the wiper still does not wipe properly, this could be caused by substances on the windshield or rear window such as tree sap and some hot wax treatments used by commercial car washes. Clean the outside of the windshield or rear window with a non-abrasive cleaner such as Ford Ultra-Clear Spray Glass Cleaner, (E4AZ-19C507–AA), available from your Ford Dealer. **Do not** use abrasive cleansers on glass as they may cause scratches. The windshield or rear window is clean if beads do not form when you rinse it with water. The windshield, rear window and wiper blades should be cleaned on a regular basis, and blades or rubber elements replaced when worn.

Cleaning the instrument panel

Clean with a damp cloth, then dry with a dry cloth.

Avoid cleaner or polish that increases the gloss of the upper portion of the instrument panel. The dull finish in this area helps protect the driver from undesirable windshield reflection.

Do not use chemical solvents or strong detergents when cleaning the steering wheel or instrument panel to avoid contamination of the air bag system.

Cleaning the instrument cluster lens

Clean with a damp cloth, then dry with a dry cloth.

Do not use household or glass cleaners as these may damage the lens.

Cleaning the interior fabric

Remove dust and loose dirt with a whisk broom or a vacuum cleaner. Remove fresh spots immediately. Do not use household or glass cleaners. These agents can stain and discolor the fabric. Use a mild soap and water solution if necessary.

Cleaning and maintaining the safety belts

Clean the safety belts with a mild soap solution recommended for cleaning upholstery or carpets. Do not bleach or dye the belts, because these actions may weaken the belt webbing.

Check the safety belt system periodically to make sure there are no nicks, tears or cuts. If your vehicle has been involved in an accident, refer to the *Safety belt maintenance* section in the *Seating and safety restraints* chapter.

Cleaning leather seats (if equipped)

To clean, simply use a soft cloth dampened with water and a mild soap. Wipe the leather again with a damp cloth to remove soap residue. Dry with a soft cloth. For tougher soiling concerns, Ford recommends using the Deluxe Leather Care Kit F8AZ-19G253–AA, which is available from your Ford Dealer. This mild cleaner and special pad, cleans the leather and maintains its natural beauty. Follow the instructions on the cleaner label. Regular cleaning of your leather upholstery helps maintain its resiliency and color.

Do not use household cleaning products, alcohol solutions, solvents or cleaners intended for rubber, vinyl or plastics.

MOTORCRAFT PART NUMBERS

Component*	5.4L V8 engine	6.8L V10 engine
Air filter element	FA-1634	FA-1634
Fuel filter	FG-986B	FG-986B
Oil filter	FL-820-S	FL-820-S
PCV valve	EV-233	EV-233
Battery (Standard)	BXT-65-650	BXT-65-650
Battery (Optional)	BXT-65-750	BXT-65-750
Spark plugs-platinum**	AWSF-22W	AWSF-22W

*Refer to the *7.3 Liter Power Stroke Direct Injection Turbo Diesel Owner's Guide Supplement* for Motorcraft diesel engine service part numbers.

**Refer to Vehicle Emissions Control Information (VECI) decal for spark plug gap information.

REFILL CAPACITIES

Fluid	Ford Part Name	Application	Capacity
Front axle	Motorcraft SAE 75W-90 Premium 4x4 Front Axle Lubricant	F-250/350 (Dana 50 axle)	1.8L (3.8 pints)
		F-350/450/550 (Dana 60 axle)	2.7L (5.8 pints)
Rear axle [1,2]	Motorcraft SAE 75W-140 Synthetic Rear Axle Lubricant	F-250 /350 (10.50 inch axle)	3.3L (6.9 pints)
		F-350 DRW (DANA 80)	4.0L (8.5 pints)
	Motorcraft SAE 80W-90 Premium Rear Axle Lubricant	F-550 Dana 135	11.6L (24.5 pints)

Capacities and specifications

Fluid	Ford Part Name	Application	Capacity
Brake fluid	High Performance DOT 3 Motor Vehicle Brake Fluid	All	Fill to line on reservoir
Engine coolant [3]	Motorcraft Premium Engine Coolant (green-colored) **or** Motorcraft Premium Gold Engine Coolant (yellow-colored)	5.4L V8 engine with A/C	25.0L (26.4 quarts)
		6.8L V10 engine	27.0L (28.5 quarts)
Engine oil (includes filter change)-Gas engines	Motorcraft SAE 5W-20 Super Premium Motor Oil	All	5.7L (6.0 quarts)
Engine oil (includes filter change)-Diesel engine	Refer to your 7.3L Diesel Supplement		

Fluid	Ford Part Name	Application	Capacity
Fuel tank	N/A	Mid-ship tank (optional on Chassis Cab)	71.9L (19.0 gallons)
		Right side saddle mounted tank (optional on Chassis Cab)	87.1L (23.0 gallons)
		Short box	109.8L (29.0 gallons)
		Long box	143.9L (38.0 gallons)
		Aft axle	151.4L (40.0 gallons)
Power steering fluid	Motorcraft MERCON® ATF	All	Fill to line on reservoir
Transfer case fluid	Motorcraft MERCON® ATF	4x4 vehicles	1.9L (2.0 quarts)
Transmission fluid [4]	Synthetic MERCON® ATF	5-speed manual	3.2L (3.4 quarts) [5]
	Motorcraft MERCON® ATF	6-speed manual	5.5L (5.8 quarts) [5]
		Automatic	16.7L (17.7 quarts) [6]
Windshield washer fluid	Ultra-Clear Windshield Washer Concentrate	All	4.0L (4.25 quarts)

[1]Your vehicle's rear axle(s) may be filled with a synthetic lubricant that may require a lubricant change. Refer to the scheduled maintenance guide. Axle lubricant quantities should not need to be checked unless a leak is suspected, service is required or the axle assembly has been submerged in water. The axle lubricant should be changed any time the rear axle has been submerged in water.

[2]Add 236 ml (8 oz.) of Additive Friction Modifier C8AZ-19B546-A or equivalent meeting Ford Specification EST-M2C118-A for complete refill of Traction-Lok axles.

[3]Add the coolant type originally equipped in your vehicle.

[4]Ensure the correct automatic transmission fluid is used. Transmission fluid requirements are indicated on the dipstick or on the dipstick handle. Check the container to verify the fluid being added is of the correct type. Refer to your scheduled maintenance guide to determine the correct service interval.

Some transmission fluids may be labeled as dual usage, such as MERCON® and MERCON® V. These dual usage fluids are not to be used in an automatic transmission that requires use of the MERCON® type fluid. However, these dual usage fluids may be used in transmissions that require the MERCON® V type fluid.

MERCON® and MERCON® V type fluids are not interchangeable. DO NOT mix MERCON® and MERCON® V. Use of a transmission fluid that indicates dual usage (MERCON® and MERCON® V) in an automatic transmission application requiring MERCON® may cause transmission damage. Use of any fluid other than the recommended fluid may cause transmission damage.

[5]Service refill capacity is determined by filling the transmission to the bottom of the filler hole with the vehicle on a level surface.

[6]Indicates only approximate dry-fill capacity. Some applications may vary based on cooler size and if equipped with an in-tank cooler. The amount of transmission fluid and fluid level should be set by the indication on the dipstick's normal operating range.

LUBRICANT SPECIFICATIONS

Item	Ford part name or equivalent	Ford part number	Ford specification
Front axle (4X4)	Motorcraft SAE 75W-90 Premium 4x4 Front Axle Lubricant	XY-75W90-TQL	WSP-M2C201-A
Rear axle	Motorcraft SAE 75W-140 High Performance Synthetic Rear Axle Lube [1]	F1TZ-19580-B	WSL-M2C192-A
	Motorcraft SAE 80W-90 Premium Rear Axle Lubricant (Dana 135 axles) [1]	XY-80W90-QL	WSP-M2C197-A
Brake fluid and clutch fluid (if equipped)	High Performance DOT 3 Motor Vehicle Brake Fluid	C6AZ-19542-AB	ESA-M6C25-A and DOT 3
Engine coolant	Motorcraft Premium Engine Coolant (green-colored)	VC-4–A (in Canada, Motorcraft CXC-10)	ESE-M97B44-A
	Motorcraft Premium Gold Engine Coolant (yellow-colored)	VC-7–A	WSS-M97B51-A1

Item	Ford part name or equivalent	Ford part number	Ford specification
Engine oil	Motorcraft SAE 5W-20 Super Premium Motor Oil	XO-5W20-QSP	WSS-M2C153-H and API Certification Mark
Hinges, latches, striker plates, fuel filler door hinge and seat tracks	Multi-Purpose Grease	DOAZ-19584-AA or F5AZ-19G209-AA	ESB-M1C93-B or ESR-M1C159-A
Lock cylinders	Motorcraft penetrating and lock lubricant	Motorcraft XL-1	none
Transmission /steering/parking brake linkages and pivots, brake and clutch pedal shaft (if equipped)	Premium Long-Life Grease	XG-1-C or XG-1-K	ESA-M1C75-B
Power steering fluid and transfer case fluid (if equipped)	Motorcraft MERCON® ATF	XT-2-QDX	MERCON®
Manual transmission (5-speed)	Synthetic MERCON® ATF [2]	E6AZ-19582-B	MERCON®
Manual transmission (6-speed)	Motorcraft MERCON® ATF [2]	XT-2-QDX	MERCON®

Item	Ford part name or equivalent	Ford part number	Ford specification
Automatic transmission	Motorcraft MERCON® ATF [2]	XT-2-QDX	MERCON®
Windshield washer fluid	Ultra-clear Windshield Washer Concentrate	C9AZ-19550-AC	ESR-M17P5-A

[1]Add 236 ml (8 oz.) of Additive Friction Modifier C8AZ-19B546-A or equivalent meeting Ford specification EST-M2C118-A for complete refill of Traction-Lok axles. Ford design rear axles contain a synthetic lubricant that does not require changing unless the axle has been submerged in water. Dana rear axles also contain a synthetic lubricant but **do** require a change. Refer to your "Service Guide" for change intervals on Dana rear axles.

[2]Ensure the correct automatic transmission fluid is used. Transmission fluid requirements are indicated on the dipstick or on the dipstick handle. Check the container to verify the fluid being added is of the correct type. Refer to your scheduled maintenance guide to determine the correct service interval.

Some transmission fluids may be labeled as dual usage, such as MERCON® and MERCON® V. These dual usage fluids are not to be used in an automatic transmission that requires use of the MERCON® type fluid. However, these dual usage fluids may be used in transmissions that require the MERCON® V type fluid.

MERCON® and MERCON® V type fluids are not interchangeable. DO NOT mix MERCON® and MERCON® V. Use of a transmission fluid that indicates dual usage (MERCON® and MERCON® V) in an automatic transmission application requiring MERCON® may cause transmission damage. Use of any fluid other than the recommended fluid may cause transmission damage.

Capacities and specifications

ENGINE DATA

Engine	5.4L V8 engine	6.8L V10 engine
Cubic inches	330	415
Required fuel	87 octane	87 octane
Firing order	1-3-7-2-6-5-4-8	1-6-5-10-2-7-3-8-4-9
Spark plug gap	1.3-1.4 mm (0.052-0.056 inch)	1.3-1.4 mm (0.052-0.056 inch)
Ignition system	Coil on plug	Coil on plug
Compression ratio	9.0:1	9.0:1

VEHICLE DIMENSIONS

F250–except Crew Cab

Dimension	Body style			
	Regular Cab 4x2	Regular Cab 4x4	Super Cab 4x2	Super Cab 4x4
(1) Overall height	1 864 mm (74 in)	1 958 mm (77.1 in)	1 870 mm (73.6 in)	1 964 mm (77.3 in)
(2) Track (Front / Rear)	1 736.3 mm (68.3 in) / 1 729.3 mm (68 in)	1 736.3 mm (68.3 in) / 1 729.3 mm (68 in)	1 736.3 mm (68.3 in) / 1 729.3 mm (68 in)	1 736.3 mm (68.3 in) / 1 729.3 mm (68 in)
(3) Overall width	2 031 mm (79.9 in)	2 031 mm (79.9 in)	2 031 mm (79.9 in)	2 031 mm (79.9 in)
(4) Wheelbase	3 479.8 mm (137 in)	3 479.8 mm (137 in)	3 601.7 mm (141.8 in)[a] 4 013.2 mm (158 in)[b]	3 601.7 mm (141.8 in)[a] 4 013.2 mm (158 in)[b]
(5) Overall length	5 646 mm (222.2 in)	5 757 mm (226.6 in)	5 876 mm (231.3 in)[a] 6 177 mm (243.1 in)[b]	5 879 mm (231.4 in)[a] 6 180 mm (243.3 in)[b]

[a]Short wheel base
[b]Long wheel base

F250-Crew Cab

Dimension	Body style	
	Crew Cab 4x2	Crew Cab 4x4
(1) Overall height	1 960 mm (77.2 in)[a]/ 1 883 mm (74.1 in)[b]	2 053mm (80.8 in)[a]/ 2 052 mm (80.8 in)[b]
(2) Track (Front / Rear)	1 745 mm (68.7 in)/ 1 729 mm (68.1 in)[a,b]	1 736 mm (68.4 in)/ 1 729 mm (68.1 in)[a,b]
(3) Overall width	1 988 mm (78.3 in)[a,b]	1 988 mm (78.3 in)[a,b]
(4) Wheelbase	3 967 mm (156.2 in)[a]/ 4 379 mm (172.4 in)[b]	3 967 mm (156.2 in)[a]/ 4 379 mm (172.4 in)[b]
(5) Overall length	6 242 mm (245.8 in)[a]/ 6 654 mm (262.0 in)[b]	6 242 mm (245.8 in)[a]/ 6 654 mm (262.0 in)[b]
[a]Short wheel base [b]Long wheel base		

F350–except Crew Cab

Dimension	Body style			
	Chassis Cab	Regular Cab	Super Cab 4x2	Super Cab 4x4
(1) Overall height	1 972 mm (77.6 in)	1 860 mm (73.2 in)[c,e]	1 865 mm (73.4 in)[a] 1 861 mm (73.6 in)[b]	1 960 mm (77.2 in)
(2) Track (Front / Rear)	1 736.3 mm (68.3 in) / 1 879.6 mm (74.0 in)	1 736.3 mm (68.3 in) / 1 729.3 mm (68.0 in)	1 736.3 mm (68.3 in) / 1 729.3 mm (68.0 in)[a,c] 1 736.3 mm (68.3 in) / 1879.6 mm (74.0 in)[b,d]	1 737.3 mm (68.4 in) / 1 729.3 mm (68.0 in)
(3) Overall width	2 025 mm (79.7 in)	2 031 mm (79.9 in)	2 031 mm (79.9 in)	2 031 mm (79.9 in)

Dimension	Body style			
	Chassis Cab	**Regular Cab**	**Super Cab 4x2**	**Super Cab 4x4**
(4) Wheelbase	3 576.3 mm (140.8 in)	3 479.8 mm (137.0 in)	3 601 mm (141.8 in)[a]/ 4 013.2 mm (158.0 in)[b]	3 601 mm (141.8 in)[a]/ 4 013.2 mm (158.0 in)[b]
(5) Overall length	5 732 mm (225.7 in)	5 754 mm (226.5 in)	5 879 mm (231.4 in)[a]/ 6 288 mm (247.6 in)[b]	6 291 mm (247.7 in)

[a]Short wheel base
[b]Long wheel base
[c]Single rear wheels
[d]Dual rear wheels

F350-Crew Cab

Dimension	Body style	
	Crew Cab 4x2	**Crew Cab 4x4**
(1) Overall height	1 929 mm (75.9 in)	2 038 mm (80.2 in)
(2) Track (Front / Rear)	1 745 mm (68.7 in)/ 1 729 mm (68.1 in)[a,b]	1 736 mm (68.4 in)/ 1 729 mm (68.1 in)[a,b]
(3) Overall width	1 988 mm (78.3 in)[a,b]	2 077 mm (79.0 in)[a,b]
(4) Wheelbase	3 967 mm (156.2 in)[a]/4 379 mm (172.4 in)[b]	3 967 mm (156.2 in)[a]/4 379 mm (172.4 in)[b]
(5) Overall length	6 242 mm (245.8 in)[a]/6 654 mm (262.0 in)[b]	6 242 mm (245.8 in)[a]/6 654 mm (262.0 in)[b]

[a]Short wheel base
[b]Long wheel base

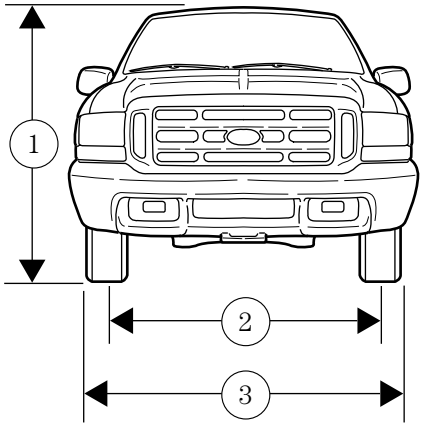
F450

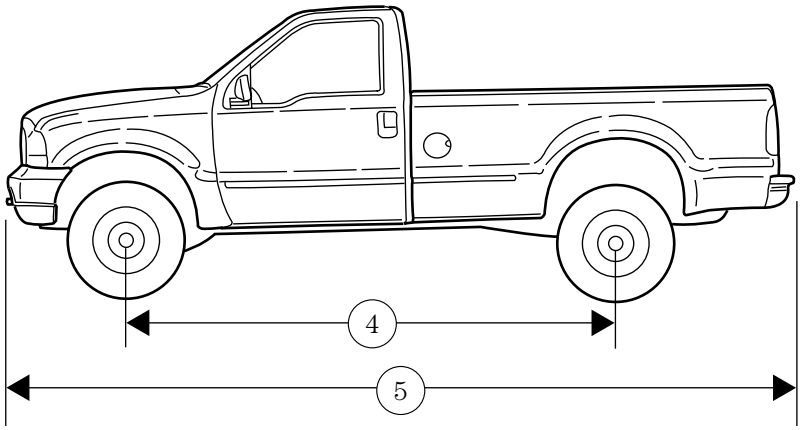
Dimension	Body style			
	Chassis Cab 4x2	**Chassis Cab 4x4**	**Crew Cab 4x2**	**Crew Cab 4x4**
(1) Overall height	2 044 mm (80.5 in)	2 051 mm (80.7 in)	2 053 mm (80.8 in)	2 056 mm (80.9 in)
(2) Track (Front / Rear)	1 736 mm (68.4 in) / 1 610 mm (63.4 in)	1 736 mm (68.4 in) / 1 610 mm (63.4 in)	1 736 mm (68.4 in) / 1 610 mm (63.4 in)	1 736 mm (68.4 in) / 1 610 mm (63.4 in)
(3) Overall width	2 025 mm (79.7 in)	2 376 mm (93.5 in)	2 376 mm (93.5 in)	2 376 mm (93.5 in)
(4) Wheelbase	3 576 mm (140.8 in)	4 186 mm (164.8 in)	4 475 mm (176.2 in)	4 475 mm (176.2 in)
(5) Overall length	5 732 mm (225.6 in)[a] 6 341 mm (249.6 in)[b]	5 733 mm (225.7 in)[a] 6 343 mm (249.7 in)[b]	5 733 mm (225.7 in)[a] 6 343 mm (249.7 in)[b]	5 733 mm (225.7 in)[a] 6 343 mm (249.7 in)[b]
[a]Short wheel base [b]Long wheel base				

F550

Dimension	Body style			
	Chassis Cab 4x2	**Chassis Cab 4x4**	**Crew Cab 4x2**	**Crew Cab 4x4**
(1) Overall height	2 076 mm (81.7 in)	2 075 mm (81.6 in)	2 067 mm (81.4 in)	2 066 mm (81.3 in)
(2) Track (Front / Rear)	1 736 mm (68.3 in) / 1 879 mm (74 in)	1 736 mm (68.3 in) / 1 879 mm (74 in)	1 736 mm (68.4 in) / 1 610 mm (63.4 in)	1 736 mm (68.4 in) / 1 610 mm (63.4 in)
(3) Overall width	2 025 mm (79.7 in)	2 376 mm (93.5 in)	2 376 mm (93.5 in)	2 376 mm (93.5 in)
(4) Wheelbase	3 576 mm (140.8 in)	3 576 mm (140.8 in)	4 475 mm (176.2 in)	4 475 mm (176.2 in)

Dimension	Body style			
	Chassis Cab 4x2	**Chassis Cab 4x4**	**Crew Cab 4x2**	**Crew Cab 4x4**
(5) Overall length	5 732 mm (225.6 in)[a]/ 6 341 mm (249.6 in)[b]	5 733 mm (225.7 in)[a]/ 6 343 mm (249.7 in)[b]	5 733 mm (225.7 in)[a]/ 6 343 mm (249.7 in)[b]	5 733 mm (225.7 in)[a]/ 6 343 mm (249.7 in)[b]
[a]Short wheel base [b]Long wheel base				

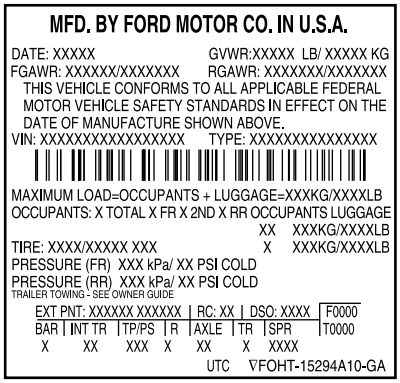




IDENTIFYING YOUR VEHICLE

Certification label

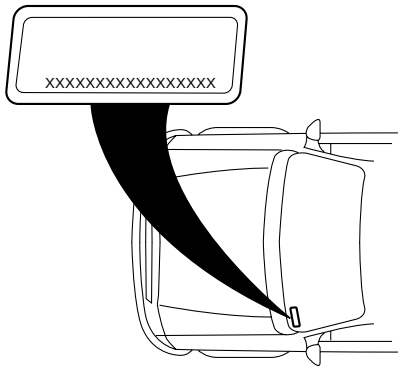
The National Highway Traffic Safety Administration Regulations require that a Certification label be affixed to a vehicle and prescribe where the Certification label may be located. The Certification label is located on the front door latch pillar on the driver's side.


MFD. BY FORD MOTOR CO. IN U.S.A.
DATE: XXXXX GVWR:XXXXX LB/ XXXXX KG
FGAWR: XXXXXX/XXXXXXX RGAWR: XXXXXXX/XXXXXXX
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
VIN: XXXXXXXXXXXXXXXXX TYPE: XXXXXXXXXXXXXXX
MAXIMUM LOAD=OCCUPANTS + LUGGAGE=XXXKG/XXXXLB
OCCUPANTS: X TOTAL X FR X 2ND X RR OCCUPANTS LUGGAGE
XX XXXKG/XXXXLB
TIRE: XXXX/XXXXX XXX X XXXKG/XXXXLB
PRESSURE (FR) XXX kPa/ XX PSI COLD
PRESSURE (RR) XXX kPa/ XX PSI COLD
TRAILER TOWING - SEE OWNER GUIDE
EXT PNT: XXXXXX XXXXXX | RC: XX | DSO: XXXX | F0000
BAR | INT TR | TP/PS | R | AXLE | TR | SPR | T0000
X XX XXX X XX X XXXX
UTC ∇FOHT-15294A10-GA

Capacities and specifications

Vehicle identification number

The vehicle identification number is attached to a metal tag and is located on the driver side instrument panel. (Please note that in the graphic XXXX is representative of your vehicle identification number.)



Engine number

The engine number (the last eight numbers of the vehicle identification number) is stamped on the engine block, transmission, frame and transfer case (if equipped).

Ford Extended Service Plan

You can get more protection for your new car or light truck by purchasing Ford Extended Service Plan (Ford ESP) coverage. Ford ESP is an optional service contract which is backed by Ford Motor Company or Ford Motor Service Company (in the U.S.) and Ford of Canada (in Canada). It provides the following:

- Benefits during the warranty period depending on the plan you purchase (such as: reimbursement for rentals; coverage for certain maintenance and wear items).
- Protection against covered repair costs after your Bumper-to-Bumper Warranty expires.

You may purchase Ford ESP from any participating Ford and Lincoln Mercury and Ford of Canada dealer. There are several plans available in various time, distance and deductible combinations which can be tailored to fit your own driving needs. Ford ESP also offers reimbursement benefits for towing and rental coverage.

When you buy Ford ESP, you receive Peace-of-Mind protection throughout the United States and Canada, provided by a network of more than 5,000 participating Ford or Lincoln Mercury and Ford of Canada dealers.

If you did not take advantage of the Ford Extended Service Plan at the time of purchasing your vehicle, you may still be eligible. Please contact your dealer for further information. Since this information is subject to change, please ask your dealer for complete details about Ford Extended Service Plan coverage options, or visit the Ford ESP website at www.ford-esp.com.

GETTING THE SERVICES YOU NEED

At home

Ford Motor Company and Ford of Canada have authorized dealerships to service your vehicle. It is preferred that you return to the Ford dealer where your vehicle was purchased when warranty repairs are needed. However, you may also take your vehicle to another Ford Motor Company or Ford of Canada dealership authorized for warranty repairs. Certain warranty repairs require special training though, so not all dealers are authorized to perform all warranty repairs. That means that depending on the warranty repair needed, the vehicle may need to be taken to another dealer. If a particular dealership can not assist you, then contact the Customer Relationship Center.

Customer assistance

If you have questions or concerns, or are unsatisfied with the service you are receiving, follow these steps:

1. Contact your Sales Representative or Service Advisor at your selling/servicing dealership.
2. If your inquiry or concern remains unresolved, contact the Sales Manager or Service Manager at the dealership.
3. If the inquiry or concern cannot be resolved at the dealership level, please contact the Ford Customer Relationship Center.

Away from home

If you own a Ford or Mercury vehicle and are away from home when your vehicle needs service, or if you need more help than the dealership could provide, after following the steps described above, contact the Ford Customer Relationship Center to find an authorized dealership to help you. In the United States:

Ford Motor Company
Customer Relationship Center
16800 Executive Plaza Drive
P.O. Box 6248
Dearborn, Michigan 48121
1-800-392-3673 (FORD)
(TDD for the hearing impaired: 1-800-232-5952)

In Canada:
Customer Relationship Centre
Ford Motor Company of Canada, Limited
P.O. Box 2000
Oakville, Ontario L6J 5E4
1-800-565-3673 (FORD)

If you own a Lincoln vehicle and are away from home when your vehicle needs service, or if you need more help than the dealership could provide, after following the steps described above, contact the Ford Customer Relationship Center to find an authorized dealership to help you.

In the United States:
Ford Motor Company
Customer Relationship Center
16800 Executive Plaza Drive
P.O. Box 6248
Dearborn, Michigan 48121
1-800-521-4140
(TDD for the hearing impaired: 1-800-232-5952)

In Canada:
Customer Relationship Centre
Ford Motor Company of Canada, Limited
P.O. Box 2000
Oakville, Ontario L6J 5E4
1-800-565-3673 (FORD)

In order to help you service your Ford or Lincoln Mercury vehicle, please have the following information available when contacting a Customer Relationship Center:

- Your telephone number (home and business).
- The name of the dealer and the city where the dealership is located.
- The year and make of your vehicle.
- The date of vehicle purchase.
- The current odometer reading.
- The vehicle identification number (VIN).

If you still have a complaint involving a warranty dispute, you may wish to contact the Dispute Settlement Board (U.S.) or the Canadian Motor Vehicle Arbitration Plan (CAMVAP), available in all of Canada (except Quebec).

In some states (in the U.S.) you must directly notify Ford in writing before pursuing remedies under your state's warranty laws. Ford is also allowed a final repair attempt in some states.

In the United States, a warranty dispute must be submitted to the Dispute Settlement Board before taking action under the Magnuson-Moss Warranty Act, or to the extent allowed by state law, before pursuing replacement or repurchase remedies provided by certain state laws. This dispute handling procedure is not required prior to enforcing state created rights or other rights which are independent of the Magnuson-Moss Warranty Act or state replacement or repurchase laws.

THE DISPUTE SETTLEMENT BOARD (U.S. only)

The Dispute Settlement Board is:

- an independent, third-party arbitration program for warranty disputes
- available free to owners and lessees of qualifying Ford Motor Company vehicles

The Dispute Settlement Board may not be available in all states. Ford Motor Company reserves the right to change eligibility limitations, modify procedures and/or to discontinue this service without notice and without incurring obligations per applicable state law.

What kinds of cases does the Board review?

Unresolved warranty repair concerns or vehicle performance concerns as on Ford and Lincoln Mercury cars and Ford and Lincoln Mercury light trucks which are within the terms of any applicable written new vehicle warranty are eligible for review, except those involving:

- a non-Ford product
- a non-Ford dealership
- sales disputes between customer and dealer except those associated with warranty repairs or concerns with the vehicle's performance as designed
- a request for reimbursement of consequential expenses unless a service or product concern is being reviewed
- items not covered by the New Vehicle Limited Warranty (including maintenance and wear items)
- alleged personal injury/property damage claims
- cases currently in litigation
- vehicles not used primarily for family, personal or household purposes (except in states where the Dispute Settlement Board is required to review commercial vehicles)
- vehicles with non-U.S. warranties

Concerns are ineligible for review if the New Vehicle Limited Warranty has expired at receipt of your application and, in certain states eligibility is dependent upon the customer's possession of the vehicle.

Eligibility may differ according to state law. For example, see the unique brochures for California, West Virginia, Georgia and Wisconsin purchasers/lessees.

Board membership

The Board consists of:

- three consumer representatives
- a Ford or Lincoln Mercury dealership representative

Consumer candidates for Board membership are recruited and trained by an independent consulting firm. The dealership Board member is chosen from Ford and Lincoln Mercury dealership management, recognized for their business leadership qualities.

What the Board needs

To have your case reviewed you must complete the application in the DSB brochure and mail it to the address provided on the application form. Some states will require you to use certified mail, with return receipt requested.

Your application is reviewed and, if it is determined to be eligible, you will receive an acknowledgment indicating:

- the file number assigned to your application
- the toll-free phone number of the DSB's independent administrator

Your dealership and a Ford Motor Company representative will then be asked to submit statements.

To properly review your case, the Board needs the following information:

- legible copies of all documents and maintenance or repair orders relevant to the case
- the year, make, model, and Vehicle Identification Number (VIN) listed on your vehicle ownership license
- the date of repair(s) and mileage at the time of occurrence(s)
- the current mileage
- the name of the dealer(s) who sold or serviced the vehicle
- a brief description of your unresolved concern
- a brief summary of the action taken by the dealer(s) and Ford Motor Company
- the names (if known) of all the people you contacted at the dealership(s)
- a description of the action you expect to resolve your concern

You will receive a letter of explanation if your application does not qualify for Board review.

Oral presentations

If you would like to make an oral presentation, indicate YES to question 6 on the application. While it is your right to make an oral presentation before the Board, this is not a requirement and the Board will decide the case whether or not an oral presentation is made. An oral presentation may be requested by the Board as well.

Making a decision

Board members review all available information related to each complaint, including oral presentations, and arrive at a fair and impartial decision. Board review may be terminated at any time by either party.

Every effort is made to decide the case within 40 days of the date that all requested information is received by the Board. Since the Board generally meets once a month, it may take longer for the Board to consider some cases.

After a case is reviewed, the Board mails you a decision letter and a form on which to accept or reject the Board's decision. The decisions of the Board are binding on Ford (and, in some cases, on the dealer) but not on consumers who are free to pursue other remedies available to them under state or federal law.

To Request a DSB Brochure/Application

For a brochure/application, speak to your dealer or write/call to the Board at the following address/phone number:

Dispute Settlement Board
P.O. Box 5120
Southfield, MI 48086–5120
1–800–428–3718

You may also contact the North American Customer Relationship Center at 1-800-392-3673 (Ford), TDD for the hearing impaired: 1-800-232-5952 or by writing to the Center at the following address:

Ford Motor Company
Customer Relationship Center
16800 Executive Plaza Drive
P.O. Box 6248
Dearborn, Michigan 48121

UTILIZING THE MEDIATION/ARBITRATION PROGRAM (CANADA ONLY)

In those cases where you continue to feel that the efforts by Ford and the dealer to resolve a factory-related vehicle service concern have been unsatisfactory, Ford of Canada participates in an impartial third party mediation/arbitration program administered by the Canadian Motor Vehicle Arbitration Plan (CAMVAP).

The CAMVAP program is a straight-forward and relatively speedy alternative to resolve a disagreement when all other efforts to produce a settlement have failed. This procedure is without cost to you and is designed to eliminate the need for lengthy and expensive legal proceedings.

In the CAMVAP program, impartial third-party arbitrators conduct hearings at mutually convenient times and places in an informal environment. These impartial arbitrators review the positions of the parties, make decisions and, when appropriate, render awards to resolve disputes. CAMVAP decisions are fast, fair, and final; the arbitrator's award is binding both to you and Ford of Canada.

CAMVAP services are available in all territories and provinces, except Quebec. For more information, without charge or obligation, call your CAMVAP Provincial Administrator directly at 1-800-207-0685.

GETTING ASSISTANCE OUTSIDE THE U.S. AND CANADA

Before exporting your vehicle to a foreign country, contact the appropriate foreign embassy or consulate. These officials can inform you of local vehicle registration regulations and where to find unleaded fuel.

If you cannot find unleaded fuel or can only get fuel with an anti-knock index lower than is recommended for your vehicle, contact a district or owner relations/customer relationship office.

The use of leaded fuel in your vehicle without proper conversion may damage the effectiveness of your emission control system and may cause engine knocking or serious engine damage. Ford Motor Company/Ford of Canada is not responsible for any damage caused by use of improper fuel.

In the United States, using leaded fuel may also result in difficulty importing your vehicle back into the U.S.

Customer assistance

If your vehicle must be serviced while you are traveling or living in Central or South America, the Caribbean, or the Middle East, contact the nearest Ford dealership. If the dealership cannot help you, write or call:

FORD MOTOR COMPANY
WORLDWIDE DIRECT MARKET OPERATIONS
1555 Fairlane Drive
Fairlane Business Park #3
Allen Park, Michigan 48101
U.S.A.
Telephone: (313) 594-4857
FAX: (313) 390-0804

If you are in another foreign country, contact the nearest Ford dealership. If the dealership employees cannot help you, they can direct you to the nearest Ford affiliate office.

If you buy your vehicle in North America and then relocate outside of the U.S. or Canada, register your vehicle identification number (VIN) and new address with Ford Motor Company Worldwide Direct Market Operations.

FORD CAR CARE PRODUCTS FOR YOUR VEHICLE

Ford has many quality products available from your dealer to clean your vehicle and protect its finishes. These quality products have been specifically engineered to fulfill your automotive needs; they are custom designed to complement the style and appearance of your vehicle. Each product is made from high quality materials and that meet or exceed Ford's rigid specifications. For best results, use the following or products of equivalent quality:

Ford Custom Clearcoat Polish*

Ford Custom Silicone Gloss Polish

Ford Custom Vinyl Protectant* (not available in Canada)

Motorcraft Vinyl Conditioner (Canada only)

Ford Deluxe Leather and Vinyl Cleaner (not available in Canada)

Motorcraft Vinyl Cleaner (Canada only)

Ford Extra Strength Tar and Road Oil Remover* (not available in Canada)

Ford Extra Strength Upholstery Cleaner (not available in Canada)

Ford Metal Surface Cleaner

Ford Multi-Purpose Cleaner*

Motorcraft Car Wash Concentrate

Motorcraft Carlite Glass Cleaner

Ford Spot and Stain Remover*

Ford Super Premium Tire and Trim Dressing

Ford Triple Clean

Ford Ultra-Clear Spray Glass Cleaner (not available in Canada)

* May be sold with the Motorcraft name

FORD ACCESSORIES FOR YOUR VEHICLE

A wide selection of genuine Ford accessories are available for your vehicle through your local authorized Ford, Lincoln Mercury or Ford of Canada dealer. These quality accessories have been specifically engineered to fulfill your automotive needs; they are custom designed to complement the style and aerodynamic appearance of your vehicle. In addition, each accessory is made from high quality materials and meets or exceeds Ford's rigorous engineering and safety specifications. Ford Motor Company will repair or replace any properly dealer-installed Ford accessory found to be defective in factory-supplied materials or workmanship during the warranty period, as well as any component damaged by the defective accessory. The accessory will be warranted for whichever provides you the greatest benefit:

- 12 months or 20 000 km (12 000 miles) (whichever occurs first), or
- The remainder of your new vehicle limited warranty.

This means that genuine Ford accessories purchased along with your new vehicle and installed by the dealer are covered for the full length of your New Vehicle's Limited Warranty — 3 years or 60 000 km (36 000 miles) (whichever occurs first). Contact your dealer for details and a copy of the warranty.

Not all accessories are available for all models.

Vehicle Security

Remote keyless entry

Styled wheel protector locks

Vehicle security systems

Customer assistance

Comfort and convenience

Air conditioner
Cargo organizers
Cargo storage bin
Cargo trays
Engine block heaters
Manual sliding rear window
Power sliding rear window
Tire step

Travel equipment

Auto headlamp system with Daytime Running Lights (DRL)
Bed Tent
Bumper mounted bike courier
Daytime running lights (DRL)
Electrochromic inside mirror with compass
Electrochromic inside mirror with compass and temperature display
Fog lights
Heavy-duty battery
Home link with travel note sun visor
Off road lights
Pickup box rails
Running boards and tubular running bars
Running boards diamond plate
Seatback organizer
Speed control
Towing mirrors
Trailer hitch, Class IV
Trailer hitch bars and balls
Trailer hitch mounted bike carrier
Trailer hitch wiring adaptor
Trailer wiring harness

Protection and appearance equipment

Air bag anti-theft locks
All weather vinyl floor mats
Bed mat/bedliner tailgate covers
Bed hooks
Bed mats
Bedliners
Brush guard
Carpet floor mats
Cleaners, waxes and polishes
Diamond plate bed rail caps
Diamond plate front box protection
Diamond plate splash guards
Diamond plate tool box
Door edge guards
Fender flares
Flat splash guards
Front end covers (full)
Hood deflectors
Leather wrap steering wheel
Locking gas cap
Lubricants and oils
Molded splash guards
Rallye bars/Combo bars
Rear window deflector
Skid plates
Side window air deflectors
Spare tire lock
Stainless steel grill insert
Step bumpers

Tailgate covers (Diamond plate)

Tonneau cover (hard and foldable)

Tonneau cover (soft)

Touch-up paint

Truck cover

Universal floor mats

Wheel covers

Wood trim

For maximum vehicle performance, keep the following information in mind when adding accessories or equipment to your vehicle:

- When adding accessories, equipment, passengers and luggage to your vehicle, do not exceed the total weight capacity of the vehicle or of the front or rear axle (GVWR or GAWR as indicated on the Safety compliance certification label). Consult your dealer for specific weight information.
- The Federal Communications Commission (FCC) and Canadian Radio Telecommunications Commission (CRTC) regulate the use of mobile communications systems - such as two-way radios, telephones and theft alarms - that are equipped with radio transmitters. Any such equipment installed in your vehicle should comply with FCC or CRTC regulations and should be installed only by a qualified service technician.
- Mobile communications systems may harm the operation of your vehicle, particularly if they are not properly designed for automotive use or are not properly installed. When operated, such systems may cause the engine to stumble or stall or cause the transmission to be damaged or operate improperly. In addition, such systems may be damaged or their performance may be affected by operating your vehicle. (Citizens band [CB] transceivers, garage door openers and other transmitters with outputs of five watts or less will not ordinarily affect your vehicle's operation.)
- Ford cannot assume responsibility for any adverse effects or damage that may result from the use of such equipment.

ORDERING ADDITIONAL OWNER'S LITERATURE

To order the publications in this portfolio, contact Helm, Incorporated at:

HELM, INCORPORATED
P.O. Box 07150
Detroit, Michigan 48207

Or call:

For a free publication catalog, order toll free: 1-800-782-4356

Monday-Friday 8:00 a.m. - 6:00 p.m. EST

(Items in this catalog may be purchased by credit card holders only.)

Obtaining a French owner's guide

French Owner's Guides can be obtained from your dealer or by writing to Ford Motor Company of Canada, Limited, Service Publications, P.O. Box 1580, Station B, Mississauga, Ontario L4Y 4G3.

IN CALIFORNIA (U.S. ONLY)

California Civil Code Section 1793.2(d) requires that, if a manufacturer or its representative is unable to repair a motor vehicle to conform to the vehicle's applicable express warranty after a reasonable number of attempts, the manufacturer shall be required to either replace the vehicle with one substantially identical or repurchase the vehicle and reimburse the buyer in an amount equal to the actual price paid or payable by the consumer (less a reasonable allowance for consumer use). The consumer has the right to choose whether to receive a refund or replacement vehicle.

Customer assistance

California Civil Code Section 1793.22(b) presumes that the manufacturer has had a reasonable number of attempts to conform the vehicle to its applicable express warranties if, within the first 18 months of ownership of a new vehicle or the first 29 000 km (18 000 miles), whichever occurs first:

1. Two or more repair attempts are made on the same nonconformity likely to cause death or serious bodily injury OR

2. Four or more repair attempts are made on the same nonconformity (a defect or condition that substantially impairs the use, value or safety of the vehicle) OR

3. The vehicle is out of service for repair of nonconformities for a total of more than 30 calendar days (not necessarily all at one time)

In the case of 1 or 2 above, the consumer must also notify the manufacturer of the need for the repair of the nonconformity at the following address:

16800 Executive Plaza Drive
Mail Drop 3NE-B
Dearborn, MI 48126

REPORTING SAFETY DEFECTS (U.S. ONLY)

If you believe that your vehicle has a defect that could cause a crash, or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Ford Motor Company.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer or Ford Motor Company.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1–800–424–9393 (202–366–0123 in the Washington D.C. area) or write to:

NHTSA
U.S. Department of Transportation
400 Seventh Street
Washington D.C. 20590

You can also obtain other information about motor vehicle safety from the Hotline.

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Item	Information
Required fuel	Unleaded fuel only - 87 octane
Fuel tank capacity	Refer to *Refill capacities* in the *Capacities and specifications* chapter.
Engine oil (includes filter change)	5.7L (6.0 quarts). Use Motorcraft SAE 5W-20 Super Premium Motor Oil, Ford specification WSS-M2C153-H.
Tire size and pressure	Refer to the Certification Label inside of driver's door
Hood release	Pull handle under the left side of the instrument panel.
Coolant capacity	Refer to *Refill capacities* in the *Capacities and specifications* chapter.
Power steering fluid capacity	Fill to line on reservoir. Use Motorcraft MERCON® ATF.
Manual transmission (5-speed) [2]	3.2L (3.4 quarts). Use Synthetic MERCON® ATF. [3]
Manual transmission (6-speed) [2]	5.5L (5.8 quarts). Use Motorcraft MERCON® ATF. [3]
Automatic transmission fluid capacity [2]	16.7L (17.7 quarts). Use Motorcraft MERCON® ATF. [4]

[1]Ensure the correct automatic transmission fluid is used. Transmission fluid requirements are indicated on the dipstick or on the dipstick handle. MERCON® and MERCON® V are not interchangeable. DO NOT mix MERCON® and MERCON® V. Refer to your scheduled maintenance guide to determine the correct service interval.

[2]Ensure the correct automatic transmission fluid is used. Transmission fluid requirements are indicated on the dipstick or on the dipstick handle. Check the container to verify the fluid being added is of the correct type. Refer to your scheduled maintenance guide to determine the correct service interval.

Some transmission fluids may be labeled as dual usage, such as MERCON® and MERCON® V. These dual usage fluids are not to be used in an automatic transmission that requires use of the MERCON® type fluid. However, these dual usage fluids may be used in transmissions that require the MERCON® V type fluid.

Filling station information

MERCON® and MERCON® V type fluids are not interchangeable. DO NOT mix MERCON® and MERCON® V. Use of a transmission fluid that indicates dual usage (MERCON® and MERCON® V) in an automatic transmission application requiring MERCON® may cause transmission damage. Use of any fluid other than the recommended fluid may cause transmission damage.

[3]Service refill capacity is determined by filling the transmission to the bottom of the filler hole with the vehicle on a level surface.

[4]Indicates only approximate dry-fill capacity. Some applications may vary based on cooler size and if equipped with in-tank cooler. The amount of transmission fluid and fluid level should be set by the indication on the dipstick's normal operating range.